

EB-2 NIW

BUSINESS PLAN

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1 The EB2 National Interest Waiver Overview

The Employment-Based Second Preference National Interest Waiver (EB-2 NIW)¹ is a U.S. immigrant visa category that allows foreign nationals to obtain lawful permanent residency without a specific job offer or labor certification if their work is deemed to be in the national interest of the U.S. Under the EB-2 classification, applicants must first qualify either as professionals holding an advanced degree or as individuals with exceptional ability in the sciences, arts, or business. USCIS defines an advanced degree as a U.S. master's degree or higher, or a bachelor's degree followed by at least five years of progressive post-baccalaureate experience. USCIS further defines exceptional ability as "a degree of expertise significantly above that ordinarily encountered" in the applicant's field. The NIW provision waives the traditional PERM labor certification requirement when USCIS determines that the applicant's proposed endeavor has substantial merit and national importance and that waiving the job offer requirement would benefit the U.S.

This petition is based on the **advanced degree** classification because Mr. John Johnson possesses educational credentials and professional expertise that exceed the minimum requirements for entry into the field of computer science and software engineering. He earned a Master of Science in Computer Science from SAMPLE UNIVERSITY, where he pursued advanced concentrations in Intelligent Systems/Robotics and Data Sciences/Database, building upon his earlier Bachelor of Science in Software Engineering with a Minor in Mathematics from the same institution. His graduate-level training provided specialized knowledge in artificial intelligence, machine learning, data architecture, distributed systems, and algorithmic design, which are directly relevant to his proposed endeavor involving the development of scalable and intelligent educational technology platforms. In addition to his academic qualifications, Mr. John Johnson has demonstrated the practical application of these advanced competencies through his professional experience. Collectively, his advanced education, technical specialization, and professional achievements establish his eligibility for classification under the EB-2 advanced degree category pursuant to USCIS standards.

¹ SOURCE



2 The Petitioner's Profile

Mr. John Johnson is a technology professional from SAMPLE COUNTRY with expertise in software engineering, artificial intelligence (AI), machine learning (ML), and educational technology development. He plans to establish SAMPLE COMPANY in SAMPLE STATE, a business focused on **creating AI-powered educational solutions that improve STEM learning opportunities in the U.S.** Through this endeavor, **the Petitioner intends to develop digital learning platforms that use adaptive technologies, automation, and data analytics to improve student engagement, increase educational accessibility, and support more effective learning methods.** Because the proposed work involves computer science, AI, and advanced software systems designed to strengthen **STEM education and workforce readiness**, the endeavor clearly falls within a STEM field of national importance.

The Petitioner has a strong academic background in computer science and engineering. He earned a Master of Science in Computer Science from SAMPLE UNIVERSITY with a focus on intelligent systems, robotics, data science, and database technologies. He also completed a Bachelor of Science in Software Engineering with a Minor in Mathematics from the same institution. His education provided advanced training in machine learning, AI, distributed systems, data management, and software development, all of which directly support the educational technology solutions he plans to develop.

In addition to his education, Mr. John Johnson has gained valuable experience working in advanced technology environments. He has worked in software engineering roles where he contributed to the development of large-scale digital systems, cloud-based applications, and enterprise software platforms. His responsibilities included improving system performance, supporting cloud infrastructure, developing applications, and enhancing operational efficiency. This experience gave him practical knowledge in building reliable and secure technology systems that can support large user bases and complex digital operations.

The Petitioner has also shown a strong interest in education and STEM advancement throughout his career. Earlier in his professional journey, he worked as a mathematics tutor, helping students improve their understanding of technical subjects and succeed in academically challenging courses. In this role, he had a direct exposure to educational



challenges which strengthened his interest in using technology to improve learning outcomes and accessibility.

Mr. John Johnson has additionally developed several educational and AI-based technology projects. One of his projects involved creating a platform that converts academic materials into personalized quizzes and study tools using machine learning, natural language processing, and speech technologies. The platform was designed to improve learning retention and support students with visual or reading difficulties. He also developed a multilingual learning platform focused on teaching and preserving an underrepresented language through interactive lessons, adaptive testing, and translation features. These projects demonstrate his ability to apply advanced technology to practical educational and accessibility needs.

Beyond these projects, the Petitioner has contributed to the development of software systems in areas such as financial technology, healthcare platforms, mobile applications, and cloud computing. All mentioned projects highlight his strong technical skills and his ability to build practical solutions for real-world challenges. His qualifications are further supported by certifications in cloud architecture, cybersecurity, deep learning, and large-scale data systems, including AWS cloud certifications.

Overall, the Petitioner's education, technical experience, and work in educational technology show that he is well-qualified to carry out the proposed endeavor. His background combines advanced STEM expertise with practical experience in software development and AI systems. As a result, Mr. John Johnson is well-positioned to develop educational technologies that can support STEM learning, improve accessibility, and contribute to workforce development in the U.S.



3 Prong 1: Endeavor Has Substantial Merit and National Importance

Mr. John Johnson's proposed endeavor focuses on improving digital education in the U.S through the development of artificial intelligence-powered learning technologies designed to increase personalization, strengthen student engagement, and expand access to high-quality STEM education. His work is intended to **support the growing national need for modern educational systems capable of preparing students and professionals for an economy increasingly driven by technology, innovation, and specialized technical skills.** Through the creation of advanced digital learning platforms, **the Petitioner seeks to help address educational gaps that continue to affect workforce readiness and long-term competitiveness in STEM-related industries.**

As online education continues to expand across the U.S., many digital learning platforms still face significant limitations related to student retention, learner engagement, and accessibility. Research on online learning environments, including SAMPLE SOURCE, has consistently shown that many programs experience low completion rates and high dropout levels. These challenges are often linked to limited personalization, insufficient learner support, and the inability of many systems to adapt to different educational needs and learning styles. Mr. John Johnson's endeavor seeks to improve these shortcomings by integrating artificial intelligence, cloud computing, adaptive learning technologies, and data-driven educational tools into digital learning systems that can better support students, educators, and workforce training initiatives.

The proposed endeavor is **closely connected to the national interest because it supports the continued advancement of STEM education in the U.S.** AI-driven educational systems capable of adapting to individual learning patterns can improve knowledge retention, increase learning efficiency, and support faster development of technical skills. These technologies can also assist with workforce reskilling efforts as industries increasingly rely on advanced technologies that require specialized training and continuous education.

The Petitioner's work is designed to create benefits that extend beyond a single organization or local educational setting. Because online learning technologies are not



limited by geographic boundaries, the endeavor has the potential to reach individuals in rural communities, underserved regions, and diverse socioeconomic populations that may otherwise have limited access to advanced STEM education and training opportunities. Although the initial focus of the platform is centered on STEM education, the technology infrastructure will also allow future expansion into additional academic and professional disciplines, increasing its long-term educational and economic value.

A major component of the proposed endeavor involves **improving accessibility and inclusion within digital education**. Mr. John Johnson intends to incorporate accessibility-focused technologies and inclusive design features that support learners with different educational and physical needs. These features may include adaptive learning interfaces, multimodal educational content, and technologies that improve accessibility for individuals with disabilities or learning barriers. By reducing obstacles to educational participation, the endeavor supports broader national goals related to educational equity, workforce inclusion, and expanded economic opportunity.

In addition to its educational value, the proposed endeavor is expected to contribute positively to the U.S. economy. **A stronger and more technologically skilled workforce supports higher productivity, increased innovation, and improved long-term economic competitiveness**. By helping individuals develop technical skills more efficiently and supporting ongoing professional education, the Petitioner's platform can assist industries facing talent shortages in STEM-related fields. Improved access to workforce training and technical education can also help reduce skills gaps that currently limit growth across technology-driven sectors of the economy.

The endeavor additionally promotes innovation within the U.S. education technology sector. AI-powered educational platforms represent an important area of technological development, and continued advancement in this field supports research, software innovation, and the creation of high-skilled jobs. Through his work, Mr. John Johnson aims to contribute to the modernization of digital education systems while supporting broader national efforts to strengthen STEM education, expand access to learning opportunities, and prepare the U.S. workforce for the demands of an increasingly technology-focused economy.



Business Operations

SAMPLE COMPANY will improve how STEM education is delivered through modern digital solutions. **The SAMPLE COMPANY's primary focus will be the development of digital platforms that transform static educational content into adaptive and interactive learning experiences.** Instead of relying on traditional one-size-fits-all instruction, the platform will organize educational materials into structured learning sequences that respond to individual progress and performance. By applying educational practices such as continuous assessment, guided progression, interactive reinforcement, and personalized feedback, the system will help learners better understand difficult concepts and retain information more effectively over time. This approach is intended to create a more efficient and student-centered educational experience across multiple learning levels.

Artificial intelligence will serve as one of the core technologies supporting the platform's functionality. The system will use AI-driven tools to personalize educational content according to each learner's strengths, weaknesses, and pace of learning. Features may include automatically generated quizzes, customized study recommendations, progress monitoring tools, and intelligent feedback systems that adapt educational content in real time. Through continuous analysis of learner performance, the platform will provide a more responsive educational experience that supports improved comprehension and long-term academic success.

As the SAMPLE COMPANY expands, Mr. John Johnson also plans to integrate immersive technologies, including virtual reality (VR), into selected educational modules. These tools will allow learners to participate in simulated environments that replicate laboratories, scientific demonstrations, and technical applications relevant to STEM matters. By introducing visual and experiential learning opportunities, the platform aims to improve student understanding of abstract or technically complex topics while increasing motivation and classroom engagement.

In addition to its learning platform, SAMPLE COMPANY intends to use online media and digital communication channels to encourage broader participation in STEM education. Educational videos, simplified demonstrations of scientific concepts, and interactive online content will be used to increase interest in technical subjects and direct users toward more



comprehensive learning resources available through the platform. This strategy is designed to make STEM education more approachable while helping students engage with educational material through digital environments they already use regularly.

Target clients

Accessibility will remain a major component of the SAMPLE COMPANY's operational strategy. Planned accessibility tools include audio-supported learning, captioned instructional content, adaptive interfaces, and alternative content formats that improve usability for individuals with hearing, visual, cognitive, or motor-related challenges. The SAMPLE COMPANY also plans to explore advanced accessibility technologies, including automated sign language support and flexible content delivery systems, to promote broader educational participation among underserved populations.

SAMPLE COMPANY, headquartered in SAMPLE STATE, plans to implement a nationwide growth strategy focused on expanding access to AI-driven STEM education across the U.S. **Because the SAMPLE COMPANY's services will operate through a cloud-based platform and digital delivery model, Mr. John Johnson will be able to provide educational services to learners, schools, universities, and workforce training organizations throughout the country from a centralized location.** The SAMPLE COMPANY's expansion efforts will rely on online distribution, strategic partnerships, targeted outreach, and data-informed marketing to increase adoption and strengthen its national presence over time.

SAMPLE STATE represents a strong launch location due to its large and growing technology economy, expanding student population, and increasing demand for STEM education and workforce development. Major metropolitan areas within the state continue to rank among the strongest U.S. markets for technology employment, engineering talent, and STEM-related job growth. These conditions create favorable opportunities for digital learning companies focused on technical education and workforce preparation. The region also benefits from significant population growth and a large network of educational institutions, creating sustained demand for educational technologies capable of supporting diverse learning needs.



RCL		2025 STEM Job Growth Index (STEMIndex)	
RANK	CITY	RANK	CITY
1	Austin, TX	11	Portland, OR
2	Seattle, WA	12	Nashville, TN
3	Raleigh, NC	13	Salt Lake City, UT
4	Denver, CO	14	Orlando, FL
5	Boston, MA	15	Atlanta, GA
6	San Jose, CA	16	Minneapolis, MN
7	Washington, DC	17	Richmond, VA
8	San Francisco, CA	18	Baltimore, MD
9	Dallas, TX	19	Tampa, FL
10	Charlotte, NC	20	Jacksonville, FL

The state's education system further strengthens the strategic value of launching the SAMPLE COMPANY in this market. The SAMPLE STATE serves millions of K-12 students and maintains one of the largest higher education systems in the country.² This large educational ecosystem creates ongoing demand for digital learning tools that can improve student engagement, support individualized learning, and strengthen academic performance in STEM subjects. By establishing operations in SAMPLE STATE, the SAMPLE COMPANY will gain direct access to school districts, colleges, universities, and workforce development organizations actively seeking modern educational solutions.

Mr. John Johnson has developed a phased national expansion strategy for the SAMPLE COMPANY's first five years of operation:

- **Year 1** – During the first year, SAMPLE COMPANY will focus primarily on attracting users in SAMPLE STATE and California through online access and digital marketing. California, in particular, has one of the highest concentrations of technology and STEM employment in the U.S., as well as the nation's largest public education system. The size of these markets creates strong demand for flexible educational platforms that support both students and workforce learners.³
- **Year 2** – In the second year, the SAMPLE COMPANY plans to expand into additional large markets, including New York, Florida, and Illinois. These states contain major

² SOURCE

³ SOURCE



urban economies, active technology sectors, and extensive educational and workforce training systems.

- **Year 3** – During the third year, the SAMPLE COMPANY intends to broaden its reach into suburban and rural communities where access to high-quality STEM education and digital learning resources may be more limited. Many rural areas continue to experience barriers related to internet access and educational infrastructure, creating challenges for students pursuing technical education.⁴ By offering online learning tools and accessibility-focused digital services, SAMPLE COMPANY aims to support learners in underserved communities and help reduce educational disparities.
- **Year 4** – By the fourth year, the SAMPLE COMPANY expects to establish partnerships and clients across most U.S. states, including public and private educational institutions, workforce development programs, and training organizations. This expansion aligns with continued national demand for STEM education as technology-focused occupations continue to grow faster than many other sectors of the economy.⁵
- **Year 5** – In the fifth year, SAMPLE COMPANY plans to achieve nationwide market presence through a fully adaptable cloud-based platform supported by digital outreach and remote service delivery. At this stage, the SAMPLE COMPANY expects to serve learners and organizations across all regions of the U.S. while continuing to respond to the growing demand for STEM training, workforce reskilling, and flexible online education.

SAMPLE COMPANY will focus on four major customer groups that represent millions of learners, thousands of institutions, and substantial public investment in education and skills development across the U.S.

- **K-12 School Districts and Students** – One of the SAMPLE COMPANY's primary markets will include K-12 students and school districts seeking innovative STEM learning tools and technology-supported educational resources. Public elementary and secondary schools in the U.S. enrolled approximately **XXX million** students during the Fall 2022 academic year, demonstrating the size of the national student population and the significant demand for accessible digital education platforms⁶. In addition, there are approximately **XXX** regular school districts nationwide, along with charter organizations and educational service agencies that participate in decisions related to instructional technology adoption.⁷ This large educational landscape creates strong market opportunities for digital platforms designed to improve STEM engagement, personalized learning, and educational accessibility for students with varying academic needs.

⁴ SOURCE

⁵ SOURCE

⁶ SOURCE

⁷ SOURCE



- **Colleges, Universities, and Postsecondary Training Providers** – SAMPLE COMPANY will also market its services to colleges, universities, and technical training institutions because these organizations play a critical role in STEM education, workforce preparation, and professional advancement. National education data identifies approximately **XXX** Title IV postsecondary institutions across the U.S. and its jurisdictions, reflecting a broad institutional market for digital learning technologies and licensing solutions⁸. Postsecondary enrollment levels are similarly significant, with approximately **XXX million** students enrolled in higher education programs nationwide.⁹As colleges and universities continue expanding online learning and technology-supported instruction, there is growing demand for educational systems that improve learner retention, support competency-based progression, and strengthen participation in STEM disciplines.
- **Workforce Development and STEM Reskilling Programs** – Another important customer segment includes workforce development organizations, technical reskilling programs, and employment training initiatives. According to SAMPLE SOURCE¹⁰, Federal and state governments continue investing substantial resources into workforce education and career development programs, creating ongoing demand for flexible and measurable learning technologies. Under the SAMPLE SOURCE¹¹, projected funding levels for Program Year 2024 included approximately **\$XXX million** for Adult Activities, **\$XXX billion** for Dislocated Worker Activities, and **\$XXX million** for Youth Activities. In addition, participation in registered apprenticeship programs has continued to grow, with youth apprenticeship enrollment increasing by approximately **XXX** participants between fiscal years 2020 and 2024. These trends highlight the expanding need for digital learning systems that support workforce readiness and measurable educational outcomes across diverse learner populations.
- **Individual Learners Seeking Flexible STEM Education** – SAMPLE COMPANY will also serve individual learners, including students, working professionals, and adults pursuing lifelong learning opportunities or supplemental STEM education. National education data continues to show strong participation in online and distance learning programs. Reports indicate that approximately **XXX million** undergraduate students, representing roughly **XXX%** of all undergraduates, enrolled in at least one distance education course during Fall 2021.¹² This widespread adoption of online learning demonstrates strong demand for engaging and accessible educational platforms that address common challenges such as low engagement, limited personalization, and accessibility barriers. Through its subscription-based platform, the SAMPLE COMPANY intends to provide structured and adaptive STEM learning experiences for users seeking flexible, remote educational opportunities supported by accessibility-focused technologies.

⁸ SOURCE

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¹¹ SOURCE

¹² SOURCE



Solutions Offered

The SAMPLE COMPANY's main service will be an AI-powered digital learning platform designed to deliver personalized education through adaptive learning tools, structured instructional content, and accessibility-focused features. Using artificial intelligence and data analysis, the platform will adjust learning experiences based on each user's progress, strengths, and learning needs, allowing students to move through educational material at an individualized pace while maintaining educational quality and consistency. All platform services will be developed using accessibility-focused design standards and will include assistive technologies intended to support individuals with hearing, visual, cognitive, or physical disabilities.

The SAMPLE COMPANY plans to create short educational videos, interactive online demonstrations, and simplified learning content designed to introduce technical topics in a more approachable way. These efforts will help reduce intimidation often associated with advanced STEM tasks and encourage users to continue their learning through the SAMPLE COMPANY's broader educational platform.

The SAMPLE COMPANY's services will be offered through several pricing and access models designed to support both affordability and scalability:



- **Monthly Individual Subscription** – SAMPLE COMPANY will provide individual users with full access to its AI-powered STEM learning platform through a monthly subscription priced at approximately \$XXX. This option will allow students, professionals, and independent learners to access personalized educational tools, adaptive assessments, and accessibility features without long-term commitments.
- **Annual Individual Subscription** – The SAMPLE COMPANY will also offer an annual subscription plan priced at approximately \$XXX for users seeking continuous access to the platform. This option will provide a lower overall cost compared to monthly payments while supporting long-term engagement with structured learning pathways, updated educational content, and future platform improvements.
- **Institutional Licensing Model** – SAMPLE COMPANY will make its platform available to educational institutions, workforce development organizations, and training centers through annual licensing agreements starting at approximately \$XXX per year for small and mid-sized organizations. This model will allow institutions to implement growth-oriented digital learning tools that support instructional delivery, learner assessment, and academic performance monitoring across larger student populations.

3.1 The Petitioner’s Contributions to U.S. National Interests

3.1.1 The Growing Impact of Artificial Intelligence on STEM Education

Artificial intelligence is becoming an increasingly important component of modern STEM education, helping educational institutions create more personalized, interactive, and effective learning environments. AI-powered educational technologies are improving how students learn by adapting instructional content to individual needs, increasing engagement, and supporting stronger academic performance. Research continues to demonstrate that AI tools can significantly improve educational outcomes by providing customized instruction, immediate feedback, and more flexible learning experiences.¹³

Studies examining the use of AI in STEM education have shown strong support among both educators and students for the use of intelligent learning technologies. Research findings indicate that AI systems help improve personalized instruction, deliver real-time academic feedback, and support better student performance across STEM tasks. According to SAMPLE SOURCE¹⁴, approximately XXX% of teachers and XXX% of students reported using AI-supported educational tools such as adaptive learning systems and virtual laboratories within classroom settings. Similarly, a U.S.-based survey found that approximately XXX% of teachers

¹³ SOURCE

¹⁴ SOURCE



believed AI technologies improved their teaching methods and professional effectiveness. In addition, about XXX% reported that AI tools helped provide more individualized learning experiences, while approximately XXX% stated that AI allowed them to spend more time directly interacting with students.¹⁵

Artificial intelligence also plays an important role in improving accessibility and inclusion within STEM education. Research has shown that AI-based educational systems can strengthen student motivation, participation, and academic achievement, particularly for students with disabilities or diverse learning needs. When combined with Universal Design for Learning (UDL) principles, AI technologies can create more adaptable educational environments that support different learning styles and reduce educational barriers. AI-powered tutoring systems, interactive simulations, and virtual learning laboratories have further demonstrated the ability to improve student understanding through responsive instruction and real-time support tailored to individual progress.¹⁶ Through the development of an AI-driven educational platform, Mr. John Johnson supports national priorities related to educational innovation, workforce development, and the preparation of future scientific and technical talent.

3.1.2 Advancing Education and Lifelong Learning in the U.S.

The growing demand for lifelong learning in the U.S. highlights the increasing need for accessible and technology-driven educational systems. Research conducted by SAMPLE SOURCE¹⁷ found that approximately XXX% of American adults consider themselves lifelong learners, while about XXX% participated in at least one educational activity during the previous year to improve personal knowledge or skills. In addition, approximately XXX% of employed adults engaged in professional development or job-related training to strengthen their career opportunities and workplace skills. These findings demonstrate the strong national dependence on continuous education and the need for flexible learning platforms that can support both academic advancement and workforce development across different age groups and professional backgrounds.

¹⁵ SOURCE

¹⁶ SOURCE

¹⁷ SOURCE



The rapid expansion of digital education has become a major trend within modern learning environments and continues to increase the importance of proper STEM education systems. SAMPLE SOURCE¹⁸ indicates that approximately **XXX%** of students worldwide have participated in some form of online learning, reflecting the widespread adoption of technology-supported education. At the same time, the online learning industry has experienced dramatic growth, expanding by nearly **XXX%** since 2000 and becoming one of the fastest-growing sectors within education. This shift demonstrates the growing reliance on digital learning platforms to support technical education, scientific understanding, and workforce skill development in an increasingly technology-driven economy.

Student participation and feedback further support the value of online education. Research by SAMPLE SOURCE¹⁹ suggests that approximately **XXX%** of students believe online learning offers advantages over traditional classroom instruction, particularly due to flexibility, accessibility, and self-paced learning opportunities. Within the U.S., digital learning has become increasingly common, with approximately **XXX%** of students participating in online educational activities on a daily basis. Current projections estimate that the number of online learners could reach approximately **XXX million** by 2027, further illustrating the expanding role of digital education within both academic and professional environments.

Studies also show that technology-enabled learning environments can produce measurable educational benefits. SAMPLE SOURCE²⁰ indicates that online learning systems may improve student and employee retention rates by as much as **XXX%**, suggesting that adaptive educational technologies can strengthen persistence and engagement in demanding STEM subjects. In addition, some studies have found that digital learning can reduce the time needed to acquire new knowledge or skills by approximately **XXX–XXX%**, allowing learners to progress more efficiently through technical and professional training programs. These benefits are especially important in fields such as science, engineering, mathematics, and technology, where industries continue to evolve rapidly and require ongoing skills development.

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²⁰ SOURCE



The impact of online learning also extends directly into workforce development and economic productivity. Approximately **XXX%** of businesses now provide online training or digital learning opportunities for employees, reflecting the growing importance of continuous education within the modern workforce.²¹ Research further suggests that online training programs can improve employee performance by approximately **XXX–XXX%**, demonstrating the value of technology-supported learning in increasing workplace productivity and organizational effectiveness.

From an economic perspective, the size and continued growth of the digital education market further demonstrate its national significance. Industry projections estimate that the online learning sector could exceed approximately **\$XXX billion** by the end of 2026, reflecting sustained investment in educational technologies and human capital development.²² As the U.S. continues to rely on scientific innovation, engineering expertise, and technical skills to maintain global competitiveness, adequate digital learning systems will remain essential to preparing future generations of professionals and supporting long-term economic growth.

Through his proposed AI-powered STEM platform, Mr. John Johnson aims to support learners at different educational and professional stages by providing structured, adaptive, and mastery-based learning experiences.

3.1.3 Strengthening Educational Outcomes and Student Engagement in the U.S.

Education plays a critical role in economic growth, workforce development, and long-term national progress. Higher levels of education are consistently linked to stronger earnings, lower unemployment, improved health outcomes, and greater access to economic opportunities. Research from organizations such as **SAMPLE SOURCE**²³ has shown that improvements in educational attainment contribute directly to higher productivity and increased GDP per capita. Education also supports innovation, entrepreneurship, and civic participation by helping individuals develop analytical thinking, creativity, etc.

The U.S. education system represents a major part of the national economy. Public investment in education remains substantial, with spending per student in primary and secondary

²¹ SOURCE

²² SOURCE

²³ SOURCE



education exceeding the OECD average by approximately XXX%, while postsecondary spending was approximately XXX times higher than the OECD average²⁴. Education additionally supports millions of jobs across the country, with the SAMPLE SOURCE²⁵ reporting approximately XXX million jobs within educational instruction and library occupations. The sector is also expected to generate approximately XXX job openings annually through 2032 due to continued workforce demand and employee replacement needs.

At the same time, educational gaps continue to create significant economic and social challenges. Research has estimated that achievement disparities between U.S. students and students in other countries contributed to economic losses of approximately \$XXX trillion in a single year.²⁶ Differences in academic performance tied to income levels, educational access, and school systems also continue to limit economic potential and workforce development. These findings highlight the importance of improving educational quality, accessibility, and student engagement throughout the U.S.

Mr. John Johnson's proposed endeavor seeks to address these challenges through the development of AI-powered STEM learning technologies designed to improve instructional quality and educational outcomes. By helping students strengthen technical and analytical abilities, the endeavor can contribute to the continued development of a highly skilled workforce. In addition, the Petitioner's work may help reduce educational barriers that contribute to long-standing achievement gaps. Through accessible digital learning systems, Mr. John Johnson intends to expand opportunities for students who may have limited access to high-quality STEM education and instructional support. By improving educational participation and student success, the proposed endeavor supports broader national goals related to workforce readiness, economic growth, innovation, and long-term social development.

3.1.4 Supporting STEM Teacher Effectiveness and Educational Quality

The U.S. continues to face a significant shortage of qualified STEM teachers, particularly in low-income and high-need school districts. According to SAMPLE SOURCE²⁷, more than XXX%

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of states report shortages in STEM educators. At the same time, fewer graduates with STEM degrees are choosing careers in teaching, largely because technical professions outside education often offer higher salaries and stronger financial opportunities. This decline in qualified STEM instructors creates challenges for schools attempting to prepare students for careers in science, engineering, mathematics, and technology.

The demand for STEM professionals continues to increase rapidly across the U.S. economy. SAMPLE SOURCE research²⁸ shows that STEM occupations are growing at nearly twice the rate of non-STEM occupations. However, the education system has struggled to keep pace due in part to the limited number of trained STEM teachers available to support student development in these fields. Student performance data further reflects these challenges. National assessment results from SAMPLE SOURCE²⁹ indicate that only approximately **XXX%** of eighth-grade students demonstrate proficiency in mathematics, while only about **XXX%** reach proficiency in science. These outcomes highlight the need for stronger STEM instruction and more effective educational support systems.

Teachers play a central role in student achievement and long-term educational success. However, many educators continue to face high workloads, limited resources, and insufficient institutional support, particularly following the disruptions caused by the COVID-19 pandemic. These pressures have contributed to teacher burnout, lower job satisfaction, and increased risk of educators leaving the profession. STEM teachers working in underserved or high-poverty schools often experience even greater challenges, which can further weaken educational quality and student preparation in technical subjects.

Early-career teachers are especially vulnerable to these pressures because they are frequently expected to manage demanding responsibilities with limited support and professional guidance. In environments lacking collaboration, stability, and resources, educators may struggle to develop the creativity, adaptability, and problem-solving skills necessary to support innovation-focused STEM learning. Strengthening teacher resilience and improving

²⁸ SOURCE

²⁹ SOURCE



access to professional development opportunities therefore remain important priorities within the U.S. education system.³⁰

Through the Petitioner's AI-powered educational platform, teachers will gain access to adaptive learning systems, performance analytics, interactive instructional resources, and personalized educational tools that can help simplify lesson delivery and improve student comprehension in challenging STEM topics. The Petitioner recognizes the importance of supporting teacher development and long-term instructional quality. His platform aims to help educators strengthen classroom engagement, problem-solving, and improve learning outcomes through evidence-based digital learning methods. By reducing instructional barriers and providing more accessible educational resources, the proposed platform can help teachers focus more effectively on student development and academic progress.



Improving STEM education has significant national economic importance. Research from SAMPLE SOURCE³¹ shows that STEM-related industries support approximately **XXX%** of domestic jobs and contribute approximately **XXX%** of U.S. GDP. Direct STEM occupations alone account for roughly **XXX%** of national economic output and generate approximately **\$XXX trillion** in annual federal tax revenue. In addition, STEM careers currently represent approximately **XXX%** of all occupations in the U.S., reflecting the growing dependence of the economy on scientific and technical expertise. Labor projections further indicate that STEM

³⁰ SOURCE

³¹ SOURCE



occupations are expected to grow by approximately **XXX%** between 2022 and 2032, compared to approximately **XXX%** growth for non-STEM occupations.

3.1.5 Improving Digital Educational Tools and Learning Technologies

Many students face challenges related to engagement, concentration, and comprehension, while traditional instructional methods do not always address different learning styles or educational needs. Research from the SAMPLE SOURCE³² has identified continuing disparities in academic performance among students from different socioeconomic backgrounds, reinforcing the importance of developing solutions that improve accessibility and learning outcomes. As education increasingly evolves through digital innovation, advanced learning tools have become essential for supporting student engagement, creativity, and academic development.

Technology-based learning systems play an important role in improving STEM education by making instruction more interactive, visual, and engaging. Digital learning tools can help students better understand difficult concepts while supporting critical thinking, creativity, and practical analysis skills that are highly valued in today's workforce. Students who regularly interact with educational technologies also develop stronger technical abilities that prepare them for careers in science, engineering, mathematics, and other innovation-focused industries.

Research from SAMPLE SOURCE³³ further shows that digital tools are especially effective in mathematics and science instruction when combined with multiple teaching methods. Technology-assisted learning can simplify complex and abstract topics by using visual demonstrations, simulations, and interactive educational experiences. Tools such as virtual laboratories, gamified learning systems, VR and AR technologies, and mobile educational applications are increasingly used to improve STEM instruction and provide students with more practical learning opportunities.

The rapid growth of online learning has further increased the importance of advanced educational technologies in the U.S. and globally. Studies from SAMPLE SOURCE³⁴ indicate

³² SOURCE

³³ SOURCE

³⁴ SOURCE



that approximately **XXX%** of students worldwide have participated in some form of online education, while the online learning industry has expanded by approximately **XXX%** since 2000. Current projections estimate that the number of online learners could reach approximately **XXX million** users by 2027, demonstrating the growing dependence on flexible digital education systems.



Within the U.S., online learning participation has also increased significantly. Research from SAMPLE SOURCE³⁵ shows that approximately **XXX%** of students engage in online learning activities on a daily basis, while approximately **XXX%** believe online education can be more effective than traditional classroom instruction. The online education industry is currently valued at more than **\$XXX billion** and is projected to continue growing substantially in the coming years. Studies additionally suggest that digital learning systems can reduce the time required to learn new material by approximately **XXX–XXX%** and improve retention rates by as much as **XXX%**, further demonstrating the educational benefits of technology-supported instruction.

Mr. John Johnson’s proposed endeavor directly aligns with these national educational trends. His platform is designed to provide interactive, adaptive, and accessible learning experiences that support students with different educational backgrounds and learning needs.

³⁵ SOURCE



3.1.6 Alignment with National STEM and Education Initiatives

Mr. John Johnson’s proposed endeavor aligns closely with several national initiatives focused on expanding STEM education, strengthening workforce readiness, improving AI literacy, and increasing educational availability throughout the U.S. Through the development of AI-powered educational technologies and systems, the Petitioner’s work supports broader federal efforts aimed at preparing students and professionals for future scientific and technical demands.

- **SAMPLE INITIATIVE**– In April 2025, President Trump signed an executive order establishing a **SAMPLE INITIATIVE**³⁶ to promote the integration of artificial intelligence into K–12 education nationwide. The initiative emphasizes AI literacy, teacher training, public-private collaboration, and workforce preparation. Mr. John Johnson’s proposed platform directly supports these goals by providing AI-driven educational tools that help students develop technical skills and familiarity with emerging technologies while supporting educators through modern instructional systems.
- **SAMPLE INITIATIVE** – **SAMPLE SOURCE**³⁷ has announced major investments totaling tens of millions of dollars to expand education and workforce training in fields such as artificial intelligence, biotechnology, and advanced computing. These programs prioritize broad educational access, workforce preparation, and faster technical skills development. The Petitioner’s endeavor supports these objectives by creating flexible STEM learning technologies designed to help students and professionals strengthen technical competencies in high-demand industries.
- **SAMPLE INITIATIVE** – Federal lawmakers introduced the **SAMPLE INITIATIVE** to encourage nationwide participation in STEM education and strengthen collaboration among schools, businesses, and community organizations. The legislation reflects the growing national importance of increasing student interest and participation in STEM fields³⁸. Mr. John Johnson’s digital learning platform supports these efforts by creating educational environments that promote long-term involvement in science, engineering, mathematics, and technology-related subjects.
- **SAMPLE INITIATIVE** – Recent federal announcements have highlighted partnerships with major technology organizations to expand AI education and technical workforce training programs across the country. These initiatives are intended to prepare millions of learners for careers requiring advanced technical skills and continuous reskilling.³⁹ Mr. John Johnson’s proposed platform aligns with these national priorities by offering digital learning systems that support both academic learners and working professionals seeking additional STEM education and technical training.

³⁶ SOURCE

³⁷ SOURCE

³⁸ SOURCE

³⁹ SOURCE



- **SAMPLE INITIATIVE** – SAMPLE INITIATIVE on strengthening the national educator workforce by supporting teacher recruitment, retention, and professional preparation. The legislation specifically addresses ongoing teacher shortages and the need for stronger educator support systems. ⁴⁰Because the Petitioner’s platform is designed to improve STEM instruction, classroom engagement, and educational availability, his work directly supports national efforts to strengthen the quality and effectiveness of STEM education across the U.S.
- **SAMPLE INITIATIVE** – Mr. John Johnson’s endeavor also aligns with the federal SAMPLE INITIATIVE, which seeks to improve STEM education from early childhood through higher education while strengthening support for STEM educators. The initiative emphasizes equitable access to STEM learning, educator development, and long-term investment in science and technology education. Through his focus on AI-powered learning systems, adaptive instruction, and accessible educational technologies, the Petitioner’s work supports these national objectives by helping improve student outcomes and expanding participation in STEM education.

3.1.7 Economic Impact

Mr. John Johnson’s proposed endeavor is expected to contribute positively to the U.S. economy through business expansion, workforce development, and domestic job creation. By the conclusion of the fifth year of operations, SAMPLE COMPANY anticipates employing approximately **XXX** individuals within the U.S., with these positions intended for U.S. citizens and permanent residents. The SAMPLE COMPANY’s growth will support economic activity through salaries, operational spending, and increased employment opportunities within the education technology sector.

In addition to creating jobs, SAMPLE COMPANY is expected to generate tax revenue through its projected business operations and employee compensation over the next five years. The estimated tax contributions to the U.S. government during this period are presented in the chart below:

⁴⁰ SOURCE



3.1.8 Job Creation and Economic Impact

The operations of SAMPLE COMPANY are expected to contribute to job creation and broader economic activity within the U.S. The projected employment and earnings impact of the SAMPLE COMPANY can be evaluated using SAMPLE multipliers published by the SAMPLE SOURCE.⁴¹ These multipliers measure how business activity within a specific industry contributes to employment growth and household earnings throughout the economy.

For the **SAMPLE Industry** in SAMPLE STATE, the BEA’s RIMS II multipliers identify the following estimated direct economic effects:



Based on these multipliers, SAMPLE COMPANY’s projected operations are expected to generate measurable economic benefits within the educational services sector.

⁴¹ SOURCE





- **Employment Impact** – By Year 5, the SAMPLE COMPANY expects to employ approximately **XXX** in-house workers, as outlined in the Personnel Tables (Section 5.8). According to the applicable employment multiplier, these operations are projected to support approximately **XXX** total direct jobs within the regional economy.
- **Household Earnings Impact** – The SAMPLE COMPANY’s payroll is projected to reach approximately **\$XXX** by Year 5. Based on the SAMPLE multiplier, this payroll activity is expected to generate approximately **\$XXX** in household earnings impacts within the economy.

The economic impact of SAMPLE COMPANY is also expected to extend beyond SAMPLE STATE through indirect employment effects generated across related industries and service providers nationwide. National employment multiplier data published by the SAMPLE ANALYSIS demonstrates that business activity within the educational services sector contributes to additional job creation throughout the broader economy.

According to SAMPLE model, every **XXX** direct jobs created within the SAMPLE Industry support approximately **XXX** additional indirect jobs nationwide. Based on these projections, the SAMPLE COMPANY’s anticipated workforce of approximately **XXX** direct employees by Year 5 is expected to contribute to the creation of approximately **XXX** additional indirect jobs across the U.S. economy.

Through direct hiring, payroll expansion, and related economic activity, SAMPLE COMPANY is expected to contribute positively to employment growth, household earnings, and broader economic development within the U.S.

3.1.9 Supporting Economic and Educational Development in Underserved Communities

Approximately **XXX million** Americans currently live in economically distressed communities across the U.S.⁴² These communities, located in urban, suburban, and rural regions, often face persistent challenges such as poverty, limited employment opportunities, underperforming

⁴² SOURCE





schools, neighborhood instability, and insufficient investment. Through the expansion of SAMPLE COMPANY's services into underserved regions, Mr. John Johnson's proposed endeavor is expected to contribute positively to local economic development and educational accessibility.

According to the SAMPLE INDEX⁴³, approximately **XXX%** of the population in SAMPLE STATE lives in distressed communities, representing nearly **XXX million** individuals. Within the metropolitan area where SAMPLE COMPANY will operate, the percentage increases to approximately **XXX%** of the population, or roughly **XXX** residents. Distressed communities are typically characterized by high poverty rates, reduced economic opportunities, inadequate educational resources, and limited access to essential services. By operating in these areas, the Petitioner's endeavor is positioned to support broader local economic growth and workforce participation.

By employing local workers and supporting indirect employment opportunities, SAMPLE COMPANY can help increase workforce participation and household income within underserved communities. Employment growth is especially important in economically disadvantaged areas, where long-term unemployment and reduced economic mobility often create lasting financial hardship for families and communities. Even the creation of a single stable job within a low-income household can have deep long-term effects. Increased income and workforce participation can improve financial stability, access to resources, and overall quality of life while helping reduce the cycle of poverty across future generations.

Beyond employment creation, the proposed endeavor also seeks to improve access to STEM education within underserved populations. Millions of students nationwide participate in afterschool and summer STEM programs each year; however, many students from low-income families continue to face barriers related to affordability and transportation. National reports from SAMPLE SOURCE⁴⁴ indicate that between 2014 and early 2020, participation in afterschool STEM programs declined by approximately **XXX million** students, decreasing from

⁴³ SOURCE

⁴⁴ SOURCE



approximately **XXX million** participants to approximately **XXX million** participants nationwide.

The decline was most significant among lower-income households. During the same period, participation among students from low-income families dropped from approximately **XXX million** students to approximately **XXX million**, accounting for approximately **XXX%** of total afterschool program attrition, despite these students representing only approximately **XXX%** of all participants.⁴⁵ Research further shows that approximately **XXX%** of parents identified program costs as a barrier to participation, while approximately **XXX%** cited transportation concerns. STEM-focused programs were also found to have higher average weekly costs, approximately **\$XXX** per week compared to approximately **\$XXX** for other educational activities.

Strong STEM education can also help reduce educational disparities between low-income and higher-income communities by expanding access to high-demand skills and career pathways. According to the *SAMPLE SOURCE*⁴⁶, STEM occupations are projected to grow by approximately **XXX%** between 2020 and 2030, significantly faster than many non-STEM occupations.

By offering unique digital learning systems, adaptive instruction, and availability-centered educational tools, the proposed endeavor seeks to improve educational participation and help students build skills necessary for long-term academic and professional success.

4 National Demand for the Petitioner's Services and Solutions

Problem #1: Limited Access to Inclusive STEM Education

Many students across the U.S. still face barriers to quality STEM education due to differences in income, geographic location, learning disabilities, and unequal access to educational

⁴⁵ SOURCE

⁴⁶ SOURCE



resources. These limitations reduce participation in science and technical fields and restrict opportunities for long-term academic and professional growth.

To help address this issue, Mr. John Johnson intends to develop an AI-based educational platform designed to support students with diverse learning needs. The platform will incorporate inclusive learning features and adaptive instruction methods intended to improve participation and reduce barriers within STEM education.

Problem #2: Low Retention in STEM Programs

A significant number of students who begin STEM-related studies do not complete their programs, particularly in academically demanding subjects such as mathematics, engineering, and computer science. High dropout and disengagement rates continue to weaken the future supply of qualified technical professionals in the U.S.

Mr. John Johnson's proposed platform will help improve student retention by providing personalized learning pathways, adaptive assessments, and real-time instructional support. These features are intended to strengthen comprehension, improve engagement, and ensure continued academic progress within STEM disciplines.

Problem #3: Skills Gap Between Education and Workforce Needs

Many students and graduates enter the workforce without the practical skills required in modern industries. Employers increasingly seek individuals with analytical thinking, collaboration abilities, technical knowledge, and applied problem-solving experience, yet traditional educational systems do not always adequately prepare learners in these areas.

The Petitioner's platform will support workforce readiness by integrating applied learning activities, interactive instruction, and competency-focused assessments that force learners to apply technical knowledge in practical settings. This approach is intended to better align educational outcomes with current labor market expectations.

Problem #4: Need for Better Support Tools for Educators

Teachers and instructors are expected to manage growing instructional demands while adapting to evolving educational standards, digital learning environments, and student



performance needs. Many educators lack sufficient tools and support systems to efficiently monitor student progress and personalize instruction.

To support instructional effectiveness, the proposed platform will include automated feedback systems, performance analytics, and instructional support features designed to help educators track learner progress and improve classroom engagement. These tools are intended to reduce administrative burdens and allow instructors to focus more directly on teaching and student support.

Problem #5: Gaps in STEM Participation and Achievement

The U.S. continues to face disparities in STEM education related to educational access, student performance, and resource availability. These challenges affect the country's ability to develop a strong and diverse pipeline of future scientists, engineers, and technical professionals.

Mr. John Johnson's endeavor seeks to help reduce these disparities by expanding access to high-quality STEM learning resources through online educational tools capable of reaching students nationwide.

Problem #6: Outdated Approaches to STEM Instruction

Traditional educational methods do not always provide the level of engagement or personalization needed for complex STEM subjects. As educational environments continue to evolve, there is increasing demand for modern instructional tools that improve student interaction, understanding, and learning outcomes.

The Petitioner plans to modernize STEM instruction by incorporating artificial intelligence, interactive learning modules, data-informed instructional methods, and immersive educational features into the platform.

Problem #7: Growing Demand for STEM Professionals

Industries across the U.S. continue to report shortages of qualified STEM professionals in areas such as artificial intelligence, cybersecurity, software engineering, and data science. This



shortage affects economic growth, innovation capacity, and long-term national competitiveness.

Through SAMPLE COMPANY, Mr. John Johnson aims to help strengthen the future STEM workforce by increasing student participation in technical fields, supporting academic progression, and helping learners build the skills required for careers in high-demand STEM industries.

4.1 Need for Inclusive and Modern STEM Education Programs

The U.S. continues to face growing demand for qualified STEM professionals as industries increasingly rely on science, engineering, data systems, artificial intelligence, and advanced computing. STEM occupations now account for approximately XX% of the national workforce, representing more than XX million workers nationwide.⁴⁷ Between 2011 and 2021, STEM employment increased steadily, reflecting the country's continued dependence on technical talent to support economic growth, research, innovation, and national competitiveness. Importantly, more than half of STEM workers do not hold a bachelor's degree, highlighting the importance of alternative educational pathways and broader access to technical learning opportunities.

Despite this demand, major gaps remain within STEM education. Many students, particularly those from low-income communities, underrepresented populations, and individuals with learning disabilities, continue to face limited access to high-quality STEM instruction and support systems.

One of the most pressing national concerns involves the need for more inclusive learning environments capable of supporting students with diverse educational needs. Students with conditions such as ADHD, autism spectrum disorder, and other learning challenges often struggle within traditional STEM classrooms that lack personalized instructional methods⁴⁸. Research indicates that approximately XX% of children in the U.S. are affected by ADHD, while many also experience additional learning disabilities that can negatively affect academic performance in subjects such as mathematics, engineering, and science. Studies further show

⁴⁷ SOURCE

⁴⁸ SOURCE



that students with autism spectrum disorder frequently benefit from differentiated instructional approaches that are not consistently available in conventional educational settings.

At the same time, educational inequalities continue to affect access to STEM opportunities nationwide. Minority and low-income school districts often operate with fewer resources, reduced funding, and limited access to advanced instructional tools compared to wealthier districts. Research has shown that predominantly nonwhite school districts receive billions of dollars less in funding despite serving similar student populations. These disparities contribute directly to unequal educational outcomes and reduce opportunities for students to pursue STEM-related careers.

The lack of diversity within the STEM workforce remains another major challenge. Although representation among minority groups has improved in recent years, substantial gaps continue to exist across science, engineering, and technical professions. Hispanic workers currently represent approximately XX% of the STEM workforce, while African American workers account for approximately XX%.⁴⁹ American Indians and Alaska Natives remain significantly underrepresented within STEM occupations. Expanding access to STEM education among underserved populations is therefore important not only from an equity standpoint, but also for strengthening the nation's future workforce and innovation capacity.

The rapid expansion of online education has also reshaped the educational landscape throughout the U.S. Following the COVID-19 pandemic, digital learning became increasingly common due to its flexibility, convenience, and ability to reach students regardless of location. However, research consistently shows that many digital learning environments still face significant limitations.⁵⁰ Students frequently report lower engagement levels, reduced motivation, weaker interaction with instructors, and difficulty maintaining focus in remote learning settings. Studies examining online education found that many learners continue to prefer traditional classroom instruction because of stronger interaction, improved communication, and better learning outcomes. Additional research ⁵¹identified recurring

⁴⁹ SOURCE

⁵⁰ SOURCE

⁵¹ SOURCE



issues in virtual learning environments, including limited collaboration, reduced hands-on experiences, accessibility barriers, inconsistent access to technology, and the increased self-discipline required for independent study.

These findings demonstrate that simply expanding online access is not enough to improve educational outcomes. There is increasing national demand for modern educational systems capable of improving engagement, supporting individualized instruction, and addressing the needs of diverse learners. Future learning platforms must prioritize personalization, interaction, inclusivity, and effective instructional design to strengthen student participation and long-term academic success.

Mr. John Johnson's proposed endeavor directly addresses these national challenges by developing an AI-based STEM learning platform focused on improving educational engagement, supporting individualized learning pathways, and expanding access to high-quality STEM instruction. Through adaptive learning systems and features, interactive educational tools, and AI-assisted instruction, the proposed platform seeks to help improve participation, retention, and student success within the evolving U.S. education system.

4.1.1 Economic Impact of Educational Gaps in Underserved Communities

Educational attainment continues to play a major role in long-term financial stability and economic mobility in the U.S. Individuals with higher levels of education generally experience lower poverty rates, greater employment opportunities, and higher lifetime earnings. In contrast, people with limited educational attainment face substantially higher risks of poverty and long-term economic hardship. Research from SAMPLE SOURCE⁵² shows that individuals holding a bachelor's degree or higher had a poverty rate of approximately XX%, while individuals without a high school diploma experienced poverty rates exceeding XX%. Similar patterns affect children, as family income and parental education levels strongly influence educational outcomes and long-term opportunities.

Educational inequality often begins early in childhood. Studies indicate that children from lower-income households are significantly more likely to experience learning disabilities and

⁵² SOURCE



reduced access to academic support services during critical developmental stages.⁵³ Many students from underserved communities enter school without the same level of preparation as their peers, creating learning gaps that frequently continue throughout their academic careers. Further research shows that nearly XX% of children living in poverty begin formal education without adequate preparation for early learning environments.

These educational disparities continue into higher education. Students from lower-income families pursue and complete four-year college degrees at substantially lower rates than students from more



financially stable households. As a result, large portions of the population remain underrepresented within higher-paying and technically advanced industries. The long-term economic impact of these educational gaps is substantial, with studies estimating that the U.S. economy loses approximately \$XXX billion annually due to reduced productivity, lower workforce participation, and unrealized earning potential associated with persistent achievement disparities.⁵⁴

An important aspect of Mr. John Johnson's endeavor involves improving educational access for underserved populations. Through digital learning delivery, assistive learning tools, and inclusive instructional features, the platform is intended to support students across different geographic, socioeconomic, and learning backgrounds. The platform's adaptive learning capabilities may also help address achievement gaps by identifying learning difficulties early and adjusting instructional pathways based on individual student performance. Providing targeted academic support during formative learning stages can improve retention,

⁵³ SOURCE

⁵⁴ SOURCE



strengthen educational progression, and increase the likelihood of continued participation in postsecondary education and technical career pathways.

4.2 High Attrition Rates in STEM Courses

STEM fields remain critically important to the U.S. economy, scientific advancement, and long-term global competitiveness. Industries throughout the country continue to rely heavily on professionals with backgrounds in science, engineering, mathematics, computer science, and related technical disciplines. Despite increasing national demand for STEM professionals, the U.S. continues to experience difficulties not only in attracting students into these fields, but also in retaining them through graduation.

One of the most significant challenges within STEM education is the high rate of student attrition. Research from the SAMPLE SOURCE⁵⁵ found that nearly half of students who initially pursue STEM majors either switch to non-STEM fields or leave college without completing their degrees. Additional studies show that approximately XX% of bachelor's degree students and nearly XX% of associate degree students who entered STEM programs ultimately left these disciplines before graduation. These trends weaken the future supply of qualified technical professionals and limit the country's ability to meet workforce demands in high-growth industries.

Retention challenges are particularly severe during the early stages of STEM education. Many students struggle in introductory courses involving chemistry, mathematics, physics, and engineering concepts that require strong analytical reasoning and consistent academic support. Introductory chemistry courses, for example, are widely recognized for exceptionally high failure and withdrawal rates, with some studies reporting attrition levels reaching approximately XX–XX%.⁵⁶ Students who encounter difficulties in these foundational courses often lose confidence, disengage academically, or transition into less technically demanding fields of study.

Community college students face additional barriers within STEM education pathways.⁵⁷ Although community colleges provide important access points into technical education,

⁵⁵ SOURCE

⁵⁶ SOURCE

⁵⁷ SOURCE



transfer students frequently experience lower STEM completion rates compared to students who begin at four-year institutions. Many students entering STEM programs through community colleges encounter limited academic support resources, financial pressures, and gaps in foundational preparation, all of which contribute to higher rates of major switching and program withdrawal.

The Petitioner's platform will incorporate adaptive instructional systems capable of identifying learning difficulties early and providing targeted academic support before students fall behind in foundational subjects. Through personalized learning pathways, real-time feedback mechanisms, and structured reinforcement tools, the proposed system is intended to help students build stronger conceptual understanding and greater academic confidence in demanding STEM courses. The proposed endeavor is particularly relevant within modern digital learning environments, where many students continue to struggle with motivation, independent study demands, and limited instructional interaction.

4.3 Growing Disconnect Between Education and Workforce Skill Requirements

A growing concern within the U.S. education system is the disconnect between traditional academic instruction and the practical skills required in today's workforce. Employers increasingly seek graduates who can think critically, solve complex problems, collaborate effectively, and apply technical knowledge in real-world settings. However, many students complete STEM programs without fully developing these competencies.

According to the SAMPLE SOURCE⁵⁸, nearly XX% of employers prioritize problem-solving abilities when evaluating graduates, while approximately XX% place strong emphasis on teamwork and collaboration skills. Despite these expectations, only about XX% of employers believe recent graduates are adequately prepared for current workforce demands. These findings reflect a substantial gap between educational outcomes and industry needs.

This issue is particularly evident within STEM education, where many instructional models continue to rely heavily on lecture-based teaching, memorization, and theoretical coursework. While foundational knowledge remains important, students are often given limited opportunities to apply concepts in practical or interactive environments. As a result,

⁵⁸ SOURCE



many graduates struggle to transition from academic settings into professional roles that require analytical reasoning, adaptability, collaboration, and applied technical decision-making.

Research further shows that many recent graduates feel underprepared for careers requiring practical application of STEM concepts. Approximately XX% of graduates report difficulty adapting to professional environments where hands-on problem-solving and independent decision-making are essential. This challenge is especially significant in fields such as engineering, chemistry, computer science, and data analysis, where employers increasingly value applied competencies alongside academic credentials.

Mr. John Johnson's proposed endeavor directly responds to this national challenge. Through AI-assisted learning support, students will receive structured guidance while working through complex problems and applied STEM scenarios. These systems are intended to help learners build confidence, improve independent reasoning, and strengthen comprehension through repeated practice and targeted reinforcement.

4.4 Limited Instructional Training and Support for STEM Educators

A major challenge within STEM education in the U.S. is the lack of ongoing instructional training and support for educators. Many instructors receive strong technical training in their subject areas but limited preparation in modern teaching methods, student engagement strategies, and digital instruction practices.

SAMPLE SOURCE⁵⁹ study shows that fewer than XX% of chemistry instructors participate in professional development related to teaching practices, while only approximately XX% of college chemistry departments offer structured instructional training programs. As a result, many STEM courses continue to rely heavily on lecture-based instruction that may not effectively support diverse learning needs or improve long-term student engagement.

This gap directly affects student performance and retention. Study indicates that students taught by instructors without modern pedagogical training are significantly more likely to leave STEM programs or perform poorly in demanding courses. Research also found that

⁵⁹ SOURCE



students taught by untrained instructors experienced pass rates approximately XX% lower than those taught by educators who received instructional development training.

These concerns are particularly important given the growing national demand for STEM professionals. According to SAMPLE SOURCE⁶⁰, STEM occupations are projected to grow by approximately XX% between 2022 and 2032, while millions of STEM-related jobs are expected to remain unfilled due to shortages of qualified workers.

Mr. John Johnson's proposed endeavor directly addresses these challenges through the development of an AI-based educational platform designed to support both students and instructors.

4.5 Declining STEM Performance and Educational Inequality in the U.S.

Although the country has historically been a major center for scientific advancement and innovation, recent educational indicators show declining student performance in key STEM subjects compared to other nations.

International rankings placed the U.S. at approximately XXth in mathematics and XXst in science in 2021.⁶¹ SAMPLE SOURCE research further showed that only about XX% of eighth-grade students and XX% of fourth-grade students performed at or above proficiency levels in mathematics. Science performance reflected similarly modest results. At the same time, more than one million STEM-related positions remained unfilled nationwide, highlighting a widening gap between workforce demand and educational preparation.

Despite projected growth in STEM occupations, the education system continues to struggle in preparing students for technical careers. Many schools still lack strong computer science and engineering programs. Research shows that only XX states require computer science instruction in high schools, while only approximately XX% of high schools offer such courses. Additional factors including educational inequality, funding limitations, and shortages of qualified instructors continue to affect STEM participation and achievement across the country.

⁶⁰ SOURCE

⁶¹ SOURCE



Concerns surrounding mathematics and data literacy have become particularly significant. SAMPLE SOURCE⁶² reported substantial declines in mathematics performance among U.S. students, with some of the lowest scores recorded in decades. Studies further showed that U.S. students continue to trail peers in several industrialized nations in core STEM competencies. These trends raise serious concerns about the country's long-term ability to remain competitive in industries increasingly dependent on data analysis, scientific research, artificial intelligence, and advanced computing.

Educational disparities further contribute to these issues. Students from underserved and lower-income communities often have reduced access to STEM resources, experienced instructors, advanced coursework, and modern educational tools. Meanwhile, demand for educational support services continues to increase as schools, nonprofits, and workforce organizations attempt to address widening academic and economic inequalities.

Through adaptive learning systems, real-time instructional feedback, and inclusive educational tools, SAMPLE COMPANY's platform seeks to improve participation and academic progression across diverse student populations. The system is also intended to help learners build stronger analytical, technical, and data-oriented skills needed in different industries.

4.6 Growing Demand for Modern Digital STEM Learning Tools

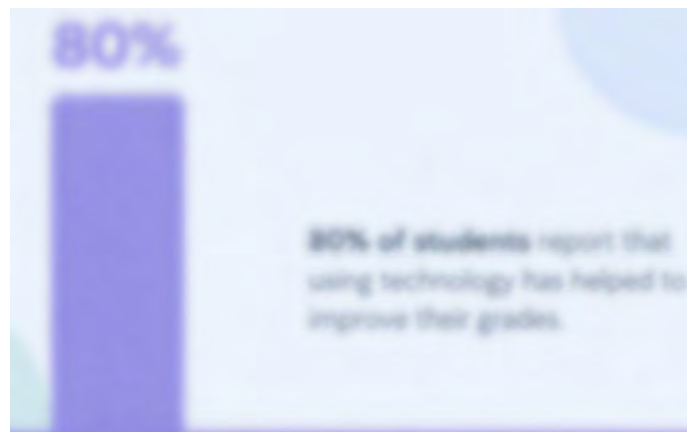
Digital learning tools are becoming increasingly important within STEM education across the U.S. Technologies such as virtual laboratories, simulations, coding platforms, analytics systems, and interactive learning applications help improve comprehension, strengthen participation, and support more individualized instruction.

Traditional teaching methods often do not fully address the diverse learning needs of students. Interactive educational systems help students better understand complex concepts through hands-on and visually supported instruction. At the same time, analytics and performance-monitoring tools allow educators to identify learning difficulties earlier and provide more targeted academic support.

⁶² SOURCE



Educational technology improves instructional efficiency by helping schools monitor student performance, manage resources, and support collaborative learning environments. Educational management systems also improve operational efficiency within schools and academic programs. These tools help administrators manage student enrollment, monitor attendance, track academic performance, and organize instructional resources more effectively. Access to real-time participation and performance data allows schools to better allocate resources such as laboratory access, instructional materials, and academic support personnel based on actual student demand. This helps reduce administrative inefficiencies while improving overall program support and instructional delivery.



Research from SAMPLE SOURCE⁶³ shows that approximately XX% of students report improved academic performance when technology is integrated into instruction, highlighting the growing importance of modern educational tools.

Mr. John Johnson's AI-based STEM learning platform is designed to improve instructional effectiveness and student understanding. The platform will incorporate adaptive learning systems, interactive instructional modules, predictive analytics, and personalized feedback tools intended to strengthen academic progression.

4.6.1 Expansion of the EdTech Sector in the U.S.

The U.S. education system has experienced rapid growth in the adoption of educational technology over the past several years. Increased reliance on digital learning platforms, online

⁶³ SOURCE



instruction, and AI-based educational systems has significantly expanded the role of EdTech within classrooms, universities, and workforce training programs nationwide.



Industry reports from SAMPLE SOURCE⁶⁴ estimate that the global EdTech market was valued at approximately \$XXX billion in 2021 and is projected to exceed \$XXX billion by 2027. In the U.S. alone, K-12 schools spent roughly \$XXX billion on educational technology in 2020, reflecting substantial investment in digital learning infrastructure and instructional tools. These trends demonstrate the growing importance of modern educational systems capable of improving instructional delivery and student performance.

The expansion of the EdTech sector has also increased demand for professionals with expertise in educational technology development and implementation. Research from SAMPLE SOURCE⁶⁵ shows that job postings for instructional designers increased by approximately XX% between 2023 and 2025, while the SAMPLE SOURCE⁶⁶ projects continued growth in instructional coordination and educational support roles throughout the coming decade. These projections reflect increasing institutional reliance on professionals who can improve how digital learning systems are integrated into educational environments.

Despite this growth, many educators still report difficulty effectively incorporating technology into classroom instruction. Studies from SAMPLE SOURCE⁶⁷ show that approximately XX% of

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educators feel insufficiently prepared to use educational technology effectively, while nearly XX% report needing additional training related to digital instructional tools and teaching strategies. These findings indicate that the availability of technology alone is insufficient without systems that also support usability, instructional integration, and educator effectiveness.

Schools implementing educational technology successfully have reported measurable improvements in classroom participation and academic performance. Research indicates that technology-supported instruction can significantly improve student outcomes, while personalized learning systems have been associated with notable improvements in assessment performance and subject comprehension.

However, barriers to adoption remain widespread. Many schools continue to face difficulties related to instructor training, technical support, and implementation resources. Approximately XX% of educators identify insufficient training as a major obstacle to technology integration, while many institutions also report shortages of qualified educational technology support personnel.⁶⁸

Mr. John Johnson's proposed system will incorporate adaptive learning tools, AI-assisted instruction, and data-informed educational support features intended to strengthen student grasp while also supporting educators through more efficient instructional systems. As educational institutions throughout the U.S. continue expanding investment in digital learning infrastructure, platforms capable of improving instructional quality, supporting diverse learners, and modernizing STEM education will play an increasingly important role within the evolving educational landscape.

5 Prong 2: The Petitioner is well positioned to advance the Proposed Endeavor

Mr. John Johnson is exceptionally well positioned to advance the proposed endeavor based on his academic background, technical expertise, professional experience, and demonstrated

⁶⁸ SOURCE



record of success in software engineering, AI systems, cloud infrastructure, and STEM-focused instruction.

Mr. Johnson earned both Bachelor's and Master's degrees in Computer Science from the University of Texas at Arlington, including graduate specialization in Intelligent Systems, Robotics, Data Science, and Database Systems. His academic training concentrated heavily on AI, machine learning, distributed computing, cloud infrastructure, software engineering, databases, and advanced analytical systems, providing a strong technical foundation directly relevant to the proposed endeavor. He further strengthened these qualifications through specialized certifications in deep learning, big data systems, cybersecurity training, and cloud architecture, including the AWS Certified Solutions Architect credential.

In addition to his academic preparation, the Petitioner has accumulated substantial industry experience within highly technical and operationally demanding environments. While serving as a Senior Software Engineer at Visa Inc., he contributed to enterprise-scale financial infrastructure supporting high-volume transaction systems, distributed applications, cybersecurity operations, and real-time monitoring environments. His work included development of transaction visibility systems, distributed synchronization services, and security remediation initiatives within mission-critical financial systems. This experience demonstrates his ability to architect reliable, high-performance platforms capable of operating securely on a scale.

More recently, Mr. Johnson served as a Software Engineer Intern at Adobe Inc., where he worked on AI-enhanced monitoring systems, automated testing environments, analytics pipelines, and cloud-based infrastructure solutions across AWS and Google Cloud Platform environments. Through this role, he gained additional experience building intelligent systems designed to improve performance analysis, automation, and operational efficiency across enterprise-level digital platforms.

Importantly, the Petitioner's background extends beyond software engineering alone. Through several years of experience as a mathematics tutor at both the University of Texas at Arlington and Brookhaven College, he directly supported STEM instruction across subjects including algebra, calculus, trigonometry, differential equations, and linear algebra. This



educational experience provided firsthand understanding of the instructional barriers, learning difficulties, and retention issues commonly affecting STEM students.

To translate the endeavor into operational reality, Mr. Johnson established SAMPLE COMPANY at SAMPLE STATE, based company formed to develop and expand AI-based STEM educational solutions throughout the U.S. Through SAMPLE COMPANY he plans to develop an integrated digital learning platform incorporating adaptive learning systems, AI-assisted instruction, predictive analytics, interactive educational modules, and accessibility-focused learning support tools. The operational plan includes phased product development, cloud infrastructure deployment, AI integration, institutional outreach, and workforce expansion. Initial business activities focus on platform architecture, instructional system development, curriculum integration, user testing, and strategic partnerships with educational stakeholders. As adoption expands, the SAMPLE COMPANY plans to scale operations through subscription-based educational services, institutional licensing agreements, and expanded support infrastructure.

The Petitioner has already taken significant steps toward implementation of the endeavor. The SAMPLE COMPANY has prepared financial forecasting models, staffing plans, platform development strategies, and market positioning initiatives aligned with projected growth within the EdTech and STEM education sectors. The proposed endeavor has also garnered support from broader market and industry trends demonstrating substantial demand for modern STEM learning solutions. Rising national investment in educational technology, increasing adoption of AI-based instructional systems, persistent STEM workforce shortages, and growing institutional demand for digital learning platforms collectively demonstrate strong commercial and educational need for the Company's services. Furthermore, the proposed endeavor aligns closely with national priorities involving STEM workforce development, AI education, educational accessibility, and modernization of digital learning infrastructure.



6 Leadership, Expertise, and Team Structure

6.1 Lead Software Engineer

The Petitioner has extensive experience designing and supporting complex digital platforms within large-scale enterprise environments. His work has included cloud-based infrastructure, real-time systems, AI-integrated technologies, distributed applications, cybersecurity, data systems, and scalable software architecture. Through these roles, he developed the technical capabilities necessary to build secure, reliable, and high-performance educational platforms capable of serving broad user populations.

Mr. John Johnson's experience extends beyond traditional software engineering into educational engagement and accessibility-focused technology development. His background as a mathematics tutor provided direct exposure to the instructional and learning challenges students face in STEM area, while his independent technology projects demonstrate a continued focus on improving educational accessibility, learner engagement, and personalized instruction through AI-powered systems.

6.2 Educational Background

Mr. John Johnson completed a Master of Science in Computer Science in December 2025 from SAMPLE UNIVERSITY located in SAMPLE STATE. His graduate studies focused on Intelligent Systems/Robotics and Data Sciences/Database, providing specialized knowledge in artificial intelligence, advanced computing systems, and data technologies. Before earning his master's degree, he graduated from the same institution in May 2021 with a Bachelor of Science in Software Engineering and a Minor in Mathematics. Through these programs, the Petitioner developed strong expertise in software architecture, algorithmic thinking, data analysis, and engineering principles that support his work in advanced educational technologies.

SAMPLE UNIVERSITY is a respected public research institution widely recognized for its academic programs and contributions to technology and engineering research. The university's Computer Science department has received strong national and international recognition, particularly in technical fields such as computing systems and advanced research



areas. Its focus on innovation and research excellence reflects the high-level academic environment in which Mr. John Johnson pursued his studies.

Earlier, in July 2018, the Petitioner earned an Associate of Science degree from SAMPLE COLLEGE in SAMPLE STATE. The institution is known for its strong academic programs and emphasis on science and technology education, helping students prepare for advanced university studies and technical careers.

In September 2015, Mr. John Johnson also completed the equivalent of an Associate Degree in Business Administration and Economic Sciences from SAMPLE UNIVERSITY in SAMPLE COUNTRY. The university is an established higher education institution recognized for its academic programs and contributions to regional education and professional development.

6.3 Professional Experience

From May 2025 through August 2025, Mr. John Johnson worked as a Software Engineer Intern at SAMPLE COMPANY in SAMPLE STATE. During this position, he contributed to the improvement of web performance and monitoring systems by developing automated tools used to detect bot activity and monitor Core Web Vitals. He also helped build cloud-based analytics infrastructure using AWS and Google Cloud technologies to support large-scale performance analysis and automated testing processes.

Between June 2021 and June 2024, Mr. John Johnson served as a Senior Software Engineer at SAMPLE COMPANY in SAMPLE STATE. In this role, he worked extensively in full-stack software engineering and DevOps within large-scale, high-availability financial systems. His responsibilities included supporting the development and improvement of real-time transaction testing systems and emergency service platforms used within a global payment infrastructure processing billions of transactions annually. The Petitioner developed transaction monitoring and message-processing capabilities that improved testing visibility, operational monitoring, and system accuracy across critical financial operations. Mr. John Johnson also contributed to deployment automation, enterprise security, and system reliability initiatives. He implemented automated deployment pipelines to improve release consistency and operational performance while supporting accessibility compliance through WCAG-aligned design improvements.



From July 2020 to August 2020, the Petitioner worked remotely as a Software Engineer Intern for SAMPLE COMPANY. During this internship, he contributed to the improvement of a nationwide fundraising platform by upgrading application features, improving interface functionality, and optimizing backend system performance.

From September 2018 through May 2021, Mr. John Johnson worked as a Mathematics Tutor at SAMPLE UNIVERSITY in SAMPLE STATE. In this position, he provided instruction and academic support in subjects including algebra, trigonometry, calculus, linear algebra, pre-calculus, and differential equations. He assisted students pursuing STEM-related coursework and supported classroom learning activities and examination administration.

Earlier, from June 2017 to July 2018, the Petitioner also worked as a Mathematics Tutor at SAMPLE COLLEGE in SAMPLE STATE. He provided tutoring support across multiple levels of mathematics instruction, helping students strengthen quantitative reasoning and academic preparedness for STEM coursework. Mr. John Johnson additionally served as a Biology Prep Lab Student Assistant. His responsibilities included preparing laboratory materials and chemical solutions for biology courses, maintaining laboratory equipment, and assisting with inventory management.

The Petitioner completed an internship with SAMPLE INSTITUTION in SAMPLE COUNTRY, which lasted from May 2015 to June 2015. During this experience, he assisted with administrative and operational activities involving banking documentation and coordination between financial institutions and private organizations. This opportunity provided him with early exposure to financial systems and institutional operations.

6.4 Technical Expertise and Professional Qualifications

To further expand his technical knowledge, the Petitioner completed several advanced certifications and professional development programs related to artificial intelligence, cybersecurity, cloud systems, and financial technology infrastructure.

- In December 2025, Mr. John Johnson completed certification programs in Deep Learning and Big Data Management and Data Sciences through SAMPLE UNIVERSITY. These programs focused on advanced AI systems, data engineering, machine learning models, and analytical technologies used in large-scale computing environments.



- In February 2023, he completed specialized ISO 8583 Transaction Parsing training through SAMPLE INSTITUTION, gaining technical knowledge related to electronic payment messaging systems used within global financial networks.
- The Petitioner also completed cybersecurity-focused training programs under NTISSI No. 4011 and CNSSI No. 4013E through SAMPLE UNIVERSITY. These programs provided instruction in information assurance, system administration, and security practices aligned with recognized U.S. cybersecurity standards.
- In addition, Mr. John Johnson earned the AWS Certified Solutions Architect – Associate credential, valid from September 2024 through September 2027. This certification demonstrates competency in cloud infrastructure design, secure system architecture, and scalable computing solutions.

Mr. John Johnson also possesses broad technical experience across multiple areas of software engineering and advanced computing.

- His work in artificial intelligence and machine learning includes experience with deep learning systems, natural language processing, AI model deployment, and intelligent automation tools using technologies such as PyTorch and LangChain.
- Within financial technology environments, he has worked with ISO 8583 transaction systems, real-time payment processing infrastructure, distributed transaction monitoring, and secure financial communication technologies.
- The Petitioner is experienced in numerous programming languages, including Python, Java, C#, JavaScript, C++, Dart, MATLAB, and C, allowing him to build software applications across a variety of technical platforms and environments.
- He has also utilized development frameworks and technologies such as .NET, Node.js, Spring Boot, Express.js, React, Angular, Flutter, SignalR, gRPC, Android development tools, NumPy, Playwright, and Puppeteer.
- His infrastructure and database experience includes systems such as MySQL, Microsoft SQL Server, MongoDB, IBM DB2, Redis, Hadoop, and HiveQL, in addition to cloud and enterprise technologies including AWS, Google Cloud Platform, Docker, Firebase, Azure DevOps, Splunk, Git, Linux/Unix systems, ServiceNow, IntelliJ IDEA, and Visual Studio Code.



- Mr. John Johnson additionally has experience with modern software engineering methodologies and architectural models, including microservices, distributed systems, RESTful APIs, event-driven applications, CI/CD automation, Agile development, MVC and MVVM frameworks, and secure software development practices.
- His cybersecurity background includes secure application development, vulnerability remediation, software compliance processes, accessibility implementation under WCAG standards, and the use of enterprise security tools such as Sonatype and Checkmarx.

Beyond software engineering, the Petitioner also has experience in data science and analytics, including statistical analysis, data modeling, and database optimization used to support operational efficiency and informed decision-making.

Mr. John Johnson is fluent in English and French and also speaks Lingala, supporting effective communication in multicultural and international professional settings.

6.5 Professional Memberships and Academic Affiliations

Throughout his academic and professional career, Mr. John Johnson has maintained active involvement in several engineering, technology, and academic organizations. These affiliations reflect his continued dedication to professional growth, technical advancement, leadership development, and participation within the broader STEM community.

SAMPLE MEMBERSHIP – Mr. John Johnson became a member of SAMPLE MEMBERSHIP in 2023. SAMPLE MEMBERSHIP is an internationally recognized professional association focused on advancing technology, engineering, and computing research. The organization is widely known for publishing technical research, developing industry standards, and supporting innovation across engineering and computer science disciplines through a large global membership network.





SAMPLE MEMBERSHIP – In 2025, the Petitioner joined SAMPLE MEMBERSHIP, one of the leading international organizations dedicated to computing and information technology. THE SAMPLE MEMBERSHIP supports the advancement of computer science through scientific publications, technical conferences, educational resources, and collaboration opportunities for professionals working within software engineering and related technical fields.



SAMPLE MEMBERSHIP – Since 2019, Mr. John Johnson has participated in SAMPLE MEMBERSHIP, an organization committed to supporting students and professionals pursuing careers in engineering and STEM disciplines. This organization promotes academic achievement, professional development, leadership training, and community engagement through a nationwide network of members and educational initiatives.



SAMPLE SOCIETY – The Petitioner was inducted into SAMPLE SOCIETY in 2017 in recognition of his academic performance while attending a two-year college institution. The organization encourages scholarship, leadership, service, and educational advancement while providing professional and academic opportunities for high-achieving students.



SAMPLE SCHOLARS – In 2017, Mr. John Johnson also joined the SAMPLE SOCIETY SCHOLARS, an honors organization that recognizes academically accomplished college students. NSCS provides members with leadership development programs, scholarship opportunities, networking resources, and professional support services.



SAMPLE COLLEGE– During 2017, the Petitioner participated in the STEM Institute at SAMPLE COLLEGE, a program focused on strengthening student preparation in science, technology,





engineering, and mathematics. The institute provides academic support, technical training, and career-focused educational opportunities designed to prepare students for advanced STEM studies and professional careers.



6.6 Honors and Academic Recognition

Throughout his academic career, Mr. John Johnson received several scholarships and academic awards that reflect strong academic performance, technical ability, and continued success in STEM-related studies.

- **SAMPLE UNIVERSITY Graduate Scholarship** – In 2024, Mr. John Johnson received a graduate scholarship from SAMPLE UNIVERSITY based on his academic qualifications and demonstrated ability to succeed in advanced computer science studies.
- **SAMPLE UNIVERSITY Transfer Scholarship** – From 2018 through 2021, the Petitioner was awarded a transfer scholarship from SAMPLE UNIVERSITY. This merit-based scholarship was provided to transfer students who met established academic standards, including maintaining a minimum GPA requirement of approximately **XXX**.
- **SAMPLE Scholarship** – Between 2018 and 2021, Mr. John Johnson also received the SAMPLE Scholarship. This scholarship is commonly awarded to members of SAMPLE SOCIETY who demonstrate strong academic achievement, leadership potential, and commitment to higher education. Eligibility for the award required maintaining a minimum GPA of approximately **XXX**, further reflecting the Petitioner's consistent academic success.
- **SAMPLE STEM Institute Scholarship** – In 2017, the Petitioner earned a scholarship through the SAMPLE STEM Institute, awarded to students pursuing STEM-related academic fields who satisfy competitive academic requirements, including maintaining a GPA of approximately **XXX**. This scholarship recognized his early academic strengths and interest in technically demanding disciplines.



6.7 Duties at the U.S. SAMPLE COMPANY

As Lead Software Engineer, Mr. John Johnson will lead the full platform development lifecycle for the SAMPLE COMPANY's digital learning platform. His responsibilities will include designing system architecture, overseeing platform development, supervising technical teams, reviewing code quality, and implementing engineering best practices. He will guide the integration of AI-powered learning tools, cloud infrastructure, data systems, and accessibility-focused technologies to ensure the platform remains secure, reliable, and capable of supporting large-scale user demand.

The Petitioner will also supervise platform scalability, cybersecurity protections, deployment processes, and ongoing software optimization. In addition, he will coordinate product development timelines, collaborate with technical and business stakeholders, and oversee continuous improvements to platform functionality and user experience. His leadership role will include mentoring technical personnel, establishing development standards, and ensuring that software solutions align with operational goals and educational needs.

Beyond technical oversight, Mr. John Johnson will monitor organizational performance, support financial planning efforts, evaluate market opportunities, and guide nationwide expansion initiatives. Through this combined executive and engineering leadership role, he will help drive innovation, maintain operational efficiency, and support the SAMPLE COMPANY's efforts to strengthen technology-enabled STEM education across the U.S.

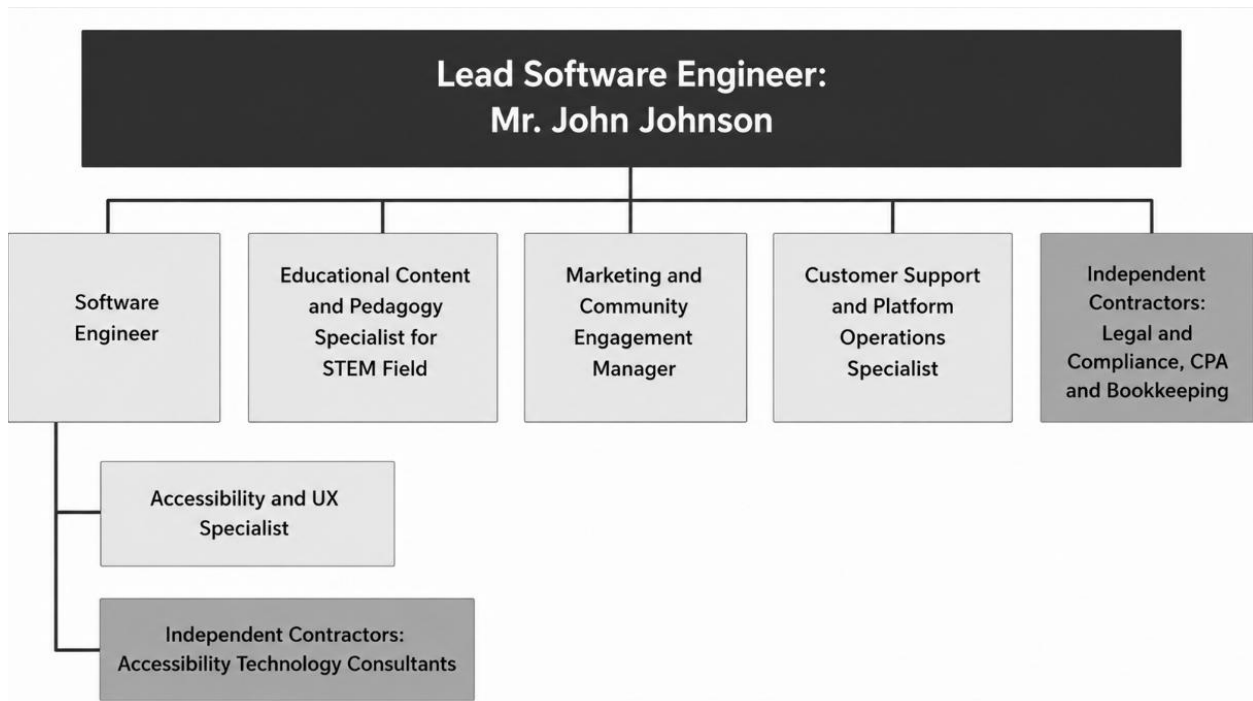
6.8 Personnel Plan

Number of Employees per Position*	Year 1	Year 2	Year 3	Year 4	Year 5
Lead Software Engineer: Mr. John Johnson	X	X	X	X	X
Software Engineer, part-time	X	X	X	X	X
Educational Content and Pedagogy Specialist for STEM Field	X	X	X	X	X
Accessibility and UX Specialist	X	X	X	X	X
Marketing and Community Engagement Manager	X	X	X	X	X
Customer Support and Platform Operations Specialist	X	X	X	X	X
Total Employees	X	X	X	X	X



Personnel Plan	Year 1	Year 2	Year 3	Year 4	Year 5
Lead Software Engineer: Mr. John Johnson	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Software Engineer	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Educational Content and Pedagogy Specialist for STEM Field	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Accessibility and UX Specialist	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Marketing and Community Engagement Manager	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Customer Support and Platform Operations Specialist	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Employees	X	X	X	X	X
Total Payroll Expenses	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX

6.9 The SAMPLE COMPANY’s Internal Organizational Chart – Year 5



7 Financial Forecasts

7.1 Funds Available

To support the launch and expansion of SAMPLE COMPANY, Mr. John Johnson intends to invest approximately **\$XXX** into the business during the initial stages of operations. This capital investment demonstrates the Petitioner’s commitment to the proposed endeavor and provides the financial foundation necessary to develop and scale the SAMPLE COMPANY’s AI-powered educational platform and related services.

The invested funds will be used to support key operational and development activities essential to the SAMPLE COMPANY’s growth and long-term sustainability. Planned use of



proceeds includes software and platform development, cloud infrastructure and hosting services, AI integration, cybersecurity implementation, accessibility-focused technology features, marketing and digital outreach, licensing costs, operational expenses, and payroll for employees and independent contractors. Additional funds may also be allocated toward research and development, platform optimization, legal and compliance services, and expansion of educational content and learning tools.

The source of the investment derives from the Petitioner’s personal funds and professional earnings accumulated through his prior employment in software engineering and technology-related positions.

Use of Proceeds	Estimated Allocation
Software and Platform Development	\$XXXX
Artificial Intelligence Integration and Development	\$XXXX
Cloud Infrastructure and Hosting Services	\$XXXX
Cybersecurity and Data Protection Systems	\$XXXX
Accessibility Technology and WCAG Compliance Features	\$XXXX
Educational Content Development	\$XXXX
Marketing and Digital Outreach	\$XXXX
Employee Salaries and Contractor Compensation	\$XXXX
Research and Development Activities	\$XXXX
Legal, Accounting, and Compliance Services	\$XXXX
Software Licensing and Technology Tools	\$XXXX
Administrative and Operational Expenses	\$XXXX
Platform Maintenance and Technical Support	\$XXXX
Contingency and Working Capital Reserve	\$XXXX
Total Estimated Investment	\$XXXX



7.2 Sales Forecast

Sales Forecast	Year 1	Year 2	Year 3	Year 4	Year 5
Unit Sales					
AI-Powered STEM Learning Platform	X	X	X	X	X
AI-Powered STEM Learning Platform	X	X	X	X	X
Institutional STEM Learning Platform	X	X	X	X	X
Total Unit sales	X	X	X	X	X
Unit Prices	Year 1	Year 2	Year 3	Year 4	Year 5
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Institutional STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Sales					
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Institutional STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Sales	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Unit Costs	Year 1	Year 2	Year 3	Year 4	Year 5
AI-Powered STEM Learning Platform	\$X	\$X	\$X	\$X	\$X
AI-Powered STEM Learning Platform	\$X	\$X	\$X	\$X	\$X
Institutional STEM Learning Platform	\$X	\$X	\$X	\$X	\$X
Direct Cost of Sales					
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
AI-Powered STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Institutional STEM Learning Platform	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Subtotal Direct Cost of Sales	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX

7.2.1 Sales Assumptions

SAMPLE COMPANY's revenue projections are based on subscription pricing, anticipated customer growth, and gradual expansion across both individual and institutional markets.

- The **AI-Powered STEM Learning Platform – Monthly Subscription Plan** is expected to be offered at approximately **\$XX.XX per month**. During the first year of operations, the SAMPLE COMPANY projects approximately **XXXX** monthly subscriptions, generating estimated revenue of approximately **\$XXXXXX**. As marketing efforts expand and platform visibility increases nationwide, the SAMPLE COMPANY anticipates continued subscriber growth, reaching approximately **XXXX** subscriptions by Year 5 and generating projected revenue of approximately **\$XXXXXX**.
- The **AI-Powered STEM Learning Platform – Annual Subscription Plan** will be priced at approximately **\$XX.XX annually**. The SAMPLE COMPANY expects to secure approximately **XXXX** annual subscribers during Year 1, resulting in estimated revenue of approximately **\$XXXXXX**. As customer retention improves and more users transition to long-term plans, annual subscriptions are projected to increase to approximately **XXXX** users by Year 5, generating approximately **\$XXXXXX** in revenue.



The increase in annual subscriptions is expected to strengthen recurring revenue stability and long-term customer engagement.

- The **Institutional STEM Learning Platform License** will be offered to schools, training organizations, and educational institutions at an estimated annual licensing fee of approximately **\$XXXX** per institution. SAMPLE COMPANY projects approximately **XXXX** institutional licenses during Year 1, producing estimated revenue of approximately **\$XXXXXX**. As the platform gains credibility and broader market adoption, the SAMPLE COMPANY expects institutional participation to grow to approximately **XXXX** licensed organizations by Year 5, resulting in projected revenue of approximately **\$XXXXXX**. Institutional partnerships are expected to support broader platform deployment, recurring contracts, and long-term market expansion.

Projected direct costs associated with sales are estimated conservatively and are expected to remain relatively stable throughout the forecast period. Estimated costs include approximately **\$XX.XX** per monthly subscription, **\$XX.XX** per annual subscription, and approximately **\$XXXX** per institutional license. These expenses primarily include cloud hosting services, AI processing infrastructure, cybersecurity protections, software licensing, customer support systems, platform maintenance, and ongoing technical improvements.

7.3 Profit and Loss

Pro Forma Profit and Loss	Year 1	Year 2	Year 3	Year 4	Year 5
Sales	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Direct Cost of Sales	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Gross Margin %	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Operating Expenses					
Payroll	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Payroll Taxes	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Marketing	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Professional Fees	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Rent	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Utilities	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Insurance	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Other	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Depreciation	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Operating Expenses	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Profit Before Interest and Taxes	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
EBITDA	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Taxes Incurred	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Net Profit	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX



7.3.1 Operational Expenses Assumptions

- **Payroll Expenses** – Salary projections are based on the staffing structure outlined in Section 5.8 and reflect estimated market compensation levels for comparable positions within the technology and education sectors. Payroll costs are projected to increase by approximately **XX% annually** to account for wage growth and business expansion.
- **Office Rent** – Rental expenses are estimated using average commercial office lease rates within SAMPLE STATE. The projections assume office space of approximately **XXXX square feet**, sufficient to support the SAMPLE COMPANY’s projected workforce and operational activities.
- **Utilities** – Utility expenses are calculated using estimated average office utility costs per square foot for commercial office space and include services such as electricity, internet, water, and related operational utilities.
- **Insurance Costs** – The SAMPLE COMPANY anticipates annual insurance expenses of approximately **\$XXXX**, including general liability coverage, workers’ compensation insurance, and a business owner’s policy (BOP) designed to support normal business operations and risk management.
- **Professional Services and Independent Contractors** – SAMPLE COMPANY expects to allocate approximately **\$XXXX annually** toward professional fees and contractor services, including legal, accounting, compliance, accessibility consulting, and specialized technical support.
- **Marketing and Advertising** – Marketing expenses are projected at approximately **XX% of total sales revenue** and will primarily support digital advertising, social media outreach, customer acquisition, and brand development efforts.
- **Equipment and Depreciation** – The SAMPLE COMPANY plans to invest approximately **\$XXXX annually** in computer hardware and related technical equipment required for employees and business operations. Equipment depreciation is projected at approximately **XX%** of total equipment costs.
- **Other Operating Expenses** – Additional miscellaneous operating expenses are estimated at approximately **\$XXXX** during Year 1 to cover general business costs not specifically identified within the financial projections.



- **Tax Assumptions** – Corporate income taxes are projected at approximately **XX%** of taxable income after applicable deductions and adjustments. Payroll taxes are estimated at approximately **XX%** of employee wages and salaries annually.

7.4 Balance Sheet

Pro Forma Balance Sheet	Year 1	Year 2	Year 3	Year 4	Year 5
Assets					
Current Assets					
Cash and Other Current Assets	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Current Assets	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Long-Term Assets					
Long-Term Assets	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Accumulated Depreciation	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Long-Term Assets	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Assets	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Capital	Year 1	Year 2	Year 3	Year 4	Year 5
Retained Earnings	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Earnings	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX
Total Capital	\$XXXX	\$XXXX	\$XXXX	\$XXXX	\$XXXX

8 Prong 3: On Balance, It Would Be Beneficial to the U.S. to Waive the Job Offer and Thus the Permanent Labor Certification Requirements

The labor certification process is intended to protect U.S. workers by requiring employers to show that there are no qualified and available U.S. candidates for a specific position before sponsoring a foreign national employee. Although this process is appropriate in traditional employment settings, it is not well suited for entrepreneurs and innovators whose work involves building and leading independent initiatives rather than occupying a predefined role within an existing company.

Mr. John Johnson’s proposed endeavor fits this circumstance. He is not seeking employment through a conventional employer-employee arrangement. Instead, **he intends to establish and expand SAMPLE COMPANY, an education-focused business centered on AI-based STEM learning systems and accessible digital education solutions. Because the endeavor depends on the Petitioner’s leadership, technical direction, and long-term vision, obtaining a traditional job offer would be impractical.**

The labor certification process also focuses on minimum qualifications tied to a specific occupation. However, the Petitioner’s background reflects a combination of expertise that



extends beyond a standard technical position. **His experience includes artificial intelligence, cloud systems, distributed computing, accessibility-focused software development, and educational applications.** This multidisciplinary knowledge allows him to create advanced learning solutions intended to improve STEM education, increase educational access, and support workforce preparation throughout the U.S.

Even if similarly qualified workers are available in the domestic labor market, the Petitioner's contributions would still provide substantial national value. His proposed work is intended to strengthen digital learning infrastructure, improve educational engagement, and support broader participation in STEM fields through AI-assisted instructional systems and educational tools.

Forgoing the labor certification process would also allow the Petitioner to move forward without delays that could hinder the timely implementation of his proposed work. **The demand for modern STEM education and AI-assisted learning solutions continues to grow as industries increasingly rely on advanced technical skills and digital systems. Educational institutions and workforce programs are under increasing pressure to adopt more effective learning methods capable of preparing students and professionals for evolving labor market needs. Delaying the Petitioner's endeavor would postpone the availability of tools designed to help address these national challenges.**

The proposed endeavor is also expected to generate broader economic benefits. **SAMPLE COMPANY plans to create employment opportunities in software engineering, educational support, accessibility consulting, operations, and related business functions.** The SAMPLE COMPANY's growth is further expected to contribute to tax revenue, contractor engagement, and additional economic activity.

Ultimately, the national benefit of the Petitioner's proposed contributions outweighs the purpose served by requiring a labor certification in this case. His work is intended to produce broad educational, economic, and workforce-related benefits that extend beyond the interests of a single employer. Accordingly, waiving the job offer and labor certification requirements would be beneficial to the U.S.