SHREENITHI MADAN

530 220 5931 • shreenithimadan@gmail.com • **portfolio**

EDUCATION

Franklin W. Olin College of Engineering — **Needham, MA**
Bachelor of Engineering in Computing — **2020 – 2024**

- Study Abroad: Full cultural immersion semester in South Korea.
- Clare Booth Luce Fellowship Recipient: Awarded through a highly competitive process to support women in STEM, recognizing academic excellence and leadership potential.
- Relevant Coursework: Full Stack Web Development, Data Structure & Algorithms, Software Systems

PROFESSIONAL EXPERIENCE

Robolabs — **Dublin, CA**
Software Engineer (part-time) — **June 2024 - Present**

- Led our team to win the Think Award at the VEX AI World Championship by designing and implementing AI algorithms using C++ and Python for autonomous robot navigation and decision-making.
- Mentored over 30 students in advanced machine learning and AI techniques for robotics, developing programming courses and hands-on labs focused on AI model deployment at the VEXAI camp.
- Engineered Robolabs BusinessOS, an automation tool suite that streamlined business processes, driving a 50% increase in operational efficiency across the organization.
- Created seamless communication and optimal site performance by managing and resolving technical issues related to the company's web infrastructure, such as integrating DNS records with Microsoft Office for organizational emails.

LineVision — **Boston, MA**
Full Stack Developer Intern — **Dec 2022 – Dec 2023**

- Enhanced data-driven decision making by 30% through the design and deployment of full-stack software solutions using React, HTML, CSS, and JavaScript, with backend automation in Python and SQL to improve workflow efficiency by 20%.
- Boosted customer satisfaction by 75% by developing a standalone application that enhanced user experience, contributing to system designs and proof-of-concept exploration for future improvements.
- Improved data process optimization by 50% and system performance by leading cross-functional efforts to integrate internal and external APIs, cloud services, and relational databases for streamlined functionality.

Amazon Robotics — **Westborough, MA**
Project Manager, Olin Senior Capstone Team — **Sept 2023 – May 2024**

- Led a cross-functional team of five in defining and executing project requirements, leveraging strong collaboration and communication skills to bridge industry needs and technical solutions.
- Designed and tested a strategic object taxonomy for Amazon's product catalog, projected to improve warehouse operations efficiency by 30% and reduce retrieval times.
- Enabled thorough testing and validation of solutions by developing a comprehensive virtual testing environment using Drake simulation software, C++, and Python.
- Ensured seamless integration and functionality of solutions in real-world settings by leading the physical testing phase.

Pfizer — **Groton, CT**
Project Management Intern, Global Clinical Supply — **May 2022 – Aug 2022**

- Delivered actionable strategy plans by developing comprehensive project documentation and streamlining timelines, accelerating project execution and boosting operational efficiency.
- Designed and implemented a department-wide academic outreach strategy, projected to enhance future recruiting efforts and strengthen institutional presence.

PROJECTS

Grid Statistics Display

- Developed a web tool to display power grid statistics, including price and carbon intensity, by integrating data from regional transmission operators, enhancing clarity and data accessibility.
- Built a high-performance backend with Flask and an optimized React frontend, improving web performance and ensuring accessible, semantic HTML for seamless data visualization.
- Designed modular frontend components for different types of graphs (load, emissions), optimizing the data presentation and simplifying the user interface for better functionality.

Fake News Detection

- Accomplished accurate replication of fake news detection results, matching benchmark accuracy (within 2-3%) by testing multiple machine learning models (KNN, RF, NB, SVM) against the Truth Seeker dataset and Hamed et al. (2023).
- Increased classification efficiency by recommending Random Forest over SVM, achieving similar accuracy while reducing runtime from 4+ hours to 30-60 minutes.
- Demonstrated minimal accuracy loss (~0.01%) by testing content-based features versus user-based features, showing content's higher accuracy with reduced computational needs.
- Highlighted opportunities for performance improvement by identifying areas for model parameter fine-tuning and runtime reduction through hyperparameter adjustments.

SKILLS

Programming Languages: Python, Javascript, C/C++, R, OCaml, Golang
Web Development: React, HTML. TypeScript. CSS, Node.js, RESTful APIs
Data Science: Python, R (data analysis, visualization, modeling), SQL
Tools and Technologies: Git, Docker/Containerization, MATLAB, Arduino, YAML, Bash, CI/CD, AWS/Google Cloud