Neeraj Savdekar

425-516-1654 | nsavdekar@outlook.com | www.linkedin.com/in/neeraj-savdekar/ | https://neerajsavd.github.io/

Summary

Software engineer experienced in AI agents, robust authentication, and embedded systems, delivering faster document validation and secure MFA systems with Python, React, and Azure. Authorized to work in the U.S. without sponsorship.

Education

University of California, Irvine Sept 2021 – Mar 2025

Bachelor of Science in Computer Science and Engineering, Cum Laude | GPA: 3.89/4.0
Relevant Courses: Machine Learning and Data-Mining, Artificial Intelligence, Organization of Digital Computers, Embedded Software, and DSA

Skills

Languages: Python, Java, C++, C#, JavaScript, SQL, HTML/CSS, Verilog
Tools: Azure, GitHub, Azure DevOps, Azure Foundry, React.js, PyTorch, Flask

Experience

Instillux | *Redmond, WA* May 2025 – Present
Software Engineer

- Reduced manual document review time by 50% by building AI Agents that automated the validation of forms at production scale, ensuring completeness, consistency, and validity.
- Developed a multi-factor authentication system using time based one-time passwords to strengthen security.

Instillux | *Redmond, WA* July 2024 – Sept 2024
Software Engineering Intern

- Constructed 7+ scalable synthetic document datasets that enabled the team to develop AI features in 4 weeks compared to the original estimate of 12 weeks.
- Designed and implemented a secure user authentication and authorization system for a React.js web application using Azure Functions and SQL server, including strong passport hashing and JWT-based session management.
- Integrated Google and Microsoft single sign-on for a seamless login experience, while rapidly learning and applying new technologies in a fast-paced environment.

UC Irvine | *Irvine, CA* Sept 2022 – Dec 2022
Course Assistant for Boolean Algebra and Logic

- Facilitated in-class discussions for 400+ students, addressing questions and clarifying concepts related to Boolean algebra, proofs, and finite automata, leading to more class engagement.
- Conducted weekly office hours to offer personalized guidance and proctored exams, ensuring academic integrity.
- Collaborated with the course instructor and 18 fellow assistants to ensure readiness, identified most effective teaching strategies, and refined assignments.

Projects

Image Segmentation for Drones Sept 2024 – Mar 2025

- Developed an image segmentation model using U-Net architecture with a ResNet34 encoder for UAVs.
- Implemented transfer learning using PyTorch, achieving a mean IOU of 0.931 and a mean accuracy of 99.7%.
- Optimized the model for real-time object detection and classification of aerial images at 5 images per second.
- Enhanced model performance by introducing data augmentation, weighted cross-entropy loss, and learning rate optimization to reduce false positives and improve accuracy, resulting in a 25% increase in per-class accuracy.
- Collaborated in a team of 4 to conduct research and train 10 versions of the model, documenting improvements.

Endless Runner Game June 2024

- Engineered an interactive endless running game using an ATmega32 microcontroller running at 8 MHz, incorporating an LCD, and joystick and keypad for user input.
- Configured crystal oscillator and employed assembly code to increase responsiveness.
- Optimized hardware interface with digital signal processing (DSP) techniques for keypress detection.