Shavil S. Singh

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Education

University of the Pacific — Stockton, CA
Masters of Science in Computer Science — *Expected May 2026*

California State University, Sacramento — Sacramento, CA
Bachelor of Science Computer Engineering - GPA: 3.5 — *Graduated May 2024*

- Dean's Honor List 2019-2023
- Tau Beta Pi - Exclusive organization limited to top 12.5% of engineering students

Experience

Software Engineer Fellowship — July 2024 – Sept. 2024
Headstarter AI — *Remote*

- Built and deployed 5 AI projects in 5 weeks using React JS, Next.js, Firebase, Clerk, and Vercel, following agile methodologies with weekly sprints and incorporating CI/CD practices for iterative deployment
- Collaborated closely with a team to develop and deploy multiple innovative projects, utilizing advanced technologies like OpenAI API, Pinecone, RAG pipeline, and Stripe API
- Participate in weekly sessions with engineers from Google, Y Combinator, Stanford, Amazon and venture-backed startups

Projects

AI Flashcards | *Node.js, React, Vercel, OpenAI, GitHub* — Aug. 2024 – Aug. 2024

- Built and deployed a SaaS product that generates dynamic flashcards based on any topic using the GPT 4o using the OpenAI API
- Implemented Clerk API which allows users to create accounts and Google Firebase to store user data
- Integrated a paywall feature, having a free and paid tier using the Stripe API

AI Rate My Professor | *Node.js, Pinecone, OpenAI, RAG* — Aug. 2024 – Aug. 2024

- Implemented a web scraper that automatically extracts data from Rate my Professor links and upsert to a Pinecone index
- Integrated with a RAG pipeline using OpenAI GPT-4o to get up-to-date and relevant answers to user queries
- Required users to log in to an account before using the program, this was done using the Clerk API

Vehicle Crash Detection Project | *Python, Yolov7, Cuda, Nvidia Jetson Nano* — Aug 2023 – May 2024

- Under the sponsorship of the California Department of Transportation, we detected car accidents in real time using Yolov7 Object Detection on the Nvidia Jetson Nano
- The program can detect stalled vehicles based on the time a car is on screen, classify vehicles, and communicate when an accident is detected.
- We set a goal of 80% accuracy which we met towards the end of the project
- Led project management and team coordination, overseeing all parts of the project to ensure that all milestones were achieved on time

Heating and Cooling System | *Python, C* — Aug. 2022 – May 2022

- Constructed a heating and cooling system using STM32, Raspberry PI, and a breadboard
- Utilized UART to send temperature data to our Raspberry PI and output it to a screen

Technical Skills

Languages: Java, Python, C/C++, Assembly, JavaScript, HTML/CSS, Verilog, VHDL, MATLAB
Technical Tools: React, Node.js, Next.js, Material-UI, PyTorch, OpenCV, TensorRT, CUDA
Developer Tools: Git, GitHub, Visual Studio Code, PyCharm, IntelliJ, Eclipse, WSL, Linux, Quartus Prime, Bitbucket, STM32CubeIDE, Multisim, Logisim, PSPICE, Keil, Vivado, Bash, Cadence, Anaconda, Jira