

Kabilan Vaikunthan

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EDUCATION

University of California, Berkeley

Expected May 2028

B.A. in Statistics, B.A. in Applied Mathematics | Junior Standing

GPA: 4.0

Relevant Coursework: Linear Algebra, Discrete Math, Structure and Interpretation of Computer Programs, Foundations of Data Science

WORK EXPERIENCE

theCoderSchool

Folsom, CA

Code Coach

August 2023 – August 2024

- Instructed 6-10 middle and high school students in Python, with a focus on cryptography, data analysis, and algorithm optimization; 3 students earned national recognition for their projects
- Developed curricula for AI and Intro to Computer Science coding camps, educating over 50 students

California Department of Transportation

Sacramento, CA

Intern

July 2023 – August 2023

- Collaborated with data scientists to model highway traffic flow through the Google Maps API and a Python regression script
- Cleaned 10,000+ data entries through a Pandas-powered script, increasing script accuracy by 10%
- Improved road closure efficiency by identifying key traffic congestion patterns and providing actionable insights

Sacramento Valley Manufacturing Alliance

Folsom, CA

Intern

May 2023 – July 2023

- Developed a local business listing website using WordPress and XAMPP, enabling educators to advertise training courses to business owners
- Automated SQL database backup procedure via Python, improving data security and reducing manual effort
- Documented the installation procedure and troubleshooting tips using Confluence to ensure smoother onboarding for future interns

ACCOMPLISHMENTS & PROJECTS

Eagle Scout | Troop 134 of Folsom, CA

May 8th, 2024

- Designed and built 4 pressure-treated 4'x4' composting bins for food bank farm with cross-bracing for stability
- Raised over \$1,000 for materials through Christmas tree pickups and presentations at veteran posts
- Increased compostable leaf storage by 50% and minimized volunteer strain by designing bins with easy access points, minimizing bending and lifting

Syllabus Scanner - SBHacks

January 2025

- Engineered a Flask-based web application that streamlines syllabus management by extracting key information through LLM-powered document parsing, resulting in 90% reduction in manual review time
- Integrated Claude 3.5 API and Aryn's DocParse to automate extraction and summarization of key course information
- Developed ETL pipeline for automatic event creation in Google Calendar from extracted dates, while maintaining user data privacy through React Context storage

Locked.ai - CalHacks

October 2024

- Developed a real-time focus-tracking website using Flask and Google MediaPipe, detecting gaze and eye closure through a laptop webcam to aid users in maintaining focus during tasks
- Designed a least-squares regression model with calibration to map gaze onto a computer screen, triggering phone vibrations if attention drifts or eyelids remain closed
- Visualized session data once done, providing users with insights into time spent focused or unfocused

SKILLS

Programming Languages & Development: Python, SQL, Flask, Git

Libraries and Frameworks: OpenCV, Pandas, NumPy, Matplotlib, MediaPipe

Tools: Google Cloud Platform, Excel/Google Sheets