Darren Saelee

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Education

University of California, Los Angeles — Los Angeles, CA
Bachelor of Science in Computer Engineering; GPA: 3.7 — *Expected December 2027*

Technical Skills

Languages: Python, C, C++, Java, JavaScript, HTML, CSS, SQL
Frameworks: Spring Boot, JPA, Gradle, ReactJS
Developer Tools: Git, Linux, IntelliJ, Visual Studio, STM32CubeIDE, Eclipse, Jupyter Notebook, Bash
Libraries: NumPy, pandas, Matplotlib, scikit-learn, Keras

Experience

Mathematics, Engineering, Science, Achievement Center (MESA) — Sep. 2024 – May 2025
Computer Science Tutor — *Elk Grove, CA*

- Tutored 4–6 students daily in Computer Science, Math, and Engineering by reviewing concepts, answering questions, and guiding through problems step-by-step.
- Assessed students' skill levels and tailored explanations and examples to meet the needs of a wide and diverse range of students.
- Fostered an inclusive and supportive learning environment through empathetic, careful teaching and encouraging students to ask questions.

Projects

Receipt & Expense Tracker | *Java, Spring Boot, JPA, JWT, Email Service, React, SQL* — 2025

- Built a full-stack expense tracker with Spring Boot and React to manage user accounts and receipts.
- Designed and implemented RESTful APIs for user authentication, receipt CRUD operations, and spending summaries for frontend integration.
- Implemented JWT-based authentication and BCrypt password hashing to secure user accounts.
- Modeled relational database schema and JPA entity mappings for receipts and categories using PostgreSQL.

STM32 Temp Sensor Firmware | *Embedded C, STM32, UART, ADC* — 2025

- Developed STM32 firmware to acquire real-time temperature data via ADC and transmit readings over UART.
- Configured GPIO, ADC, and UART peripherals using STM32 HAL libraries and verified with serial debugging.
- Applied moving average filtering to reduce noise improving temperature accuracy by 5%.
- Debugged embedded code and validated peripherals to ensure reliable real-time data acquisition.

Simple TCP Server in C | *C, POSIX Sockets, Linux(WSL)* — 2025

- Implemented a TCP server to handle client connections, send messages, and receive data using POSIX sockets.
- Implemented core networking tasks of socket creation, binding, listening, accepting, and shutdown handling.
- Applied buffer and memory management techniques to prevent leaks and ensure safe data handling.
- Debugged and validated socket operations on Linux (WSL) using GCC and command-line networking tools.

California Housing Price Prediction model | *Python, NumPy, pandas, scikit-learn* — 2025

- Developed a California housing price prediction model in Python using regression with Keras and NumPy, predicting median house prices.
- Analyzed and visualized data with pandas and Matplotlib to evaluate model accuracy and feature importance.
- Improved model accuracy by 5% through batch normalization and applying dropout to prevent overfitting.

Leadership / Extracurricular

Mathematics, Engineering, and Computer Science Club (MECS) — May 2024 – May 2025
Student Secretary — *Elk Grove, CA*

- Coordinated officer meetings, and planned event schedules ensuring smooth club operations.
- Hosted Transfer and Internship Panels to inform students of STEM career and transfer opportunities.
- Recruited and managed alumni speakers to provide networking opportunities for members.