Ahmad Jawed Rahimi

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EDUCATION

University of California, Berkeley ***Dec 2026***
B.S. Electric Engineering and Computer Science

Technicals: Structure & Interpretation of Computer Programs, Data Structures, Machine Structure, Intro to Electrical Engineering, Intro to Software Engineering, Intro to Artificial Intelligence, Circuit Analysis, Designing Information Devices and Systems I & II, Multi-Variables Physics for Scientists & Engineers, Multi-variable calculus, Linear Algebra, Differential Equation, Discrete Math & Probability Theory.

EXPERIENCE

UC Berkeley Vertical Farming **Berkeley, CA**
Engineering Division *Aug 2025 –Present*

- Design and implement engineering solutions for vertical farming systems with a focus on sustainability and efficiency. Develop and debug software for automation, robotics, and sensor-based crop monitoring.
- Assist in prototyping and testing hydroponic systems, including nutrient and water delivery mechanisms. Collaborate with interdisciplinary teams to integrate programming, engineering, and plant science in research projects.

Helping Hands Corporation **, Remote**
Software Engineer (Intern) *June 2025 – Aug 2025*

- Designed and tested software modules for intelligent task automation systems, contributing to next-generation OS-level technology and developed low-level software components in Python and C++ to interface with operating systems, improving automation capabilities.
- Participated in code reviews, debugging, and agile standups, ensuring scalable and maintainable code aligned with project standards. Researched and integrated emerging technologies in automation, AI, and systems programming to inform experimental prototypes.

UC Berkeley Formula Racing **Berkeley, CA**
Electrical Subteam – Electrical Harness specific *Aug 2024 – Dec 2025*

- Designed and constructed a high-performance electrical harness for a race car that is reliable under extreme conditions.
- Conducted rigorous testing and validation of the electrical harness, with a failure rate of less than 1%.

Folsom Lake College, **Folsom, CA**
Programming, Math, and Physics Tutor *April 2023 – Jan 2025*

- Tutored students in Calculus, Physics, C++, Java, and Python, improving performance and subject comprehension.
- Mentored students in leadership and study skills, resulting in improved academic achievement and enhanced teamwork.

El Dorado County Elections Department, **Placerville, CA**
IT & Student Assistant *April 2022 – Dec 2024*

- Provided technical support for election systems, including voting machines, ballot tabulators, and voter registration databases. Installed, configured, and maintained election software and hardware to ensure smooth operation.
- Troubleshot system errors and resolved technical issues under time-sensitive, high-pressure conditions.

PROJECTS

- **Scheme Interpreter (Python):** Built interpreter of the coding language Scheme by coding programs to output Scheme.
- **World Generator (Java):** Developed a pseudorandom world generator with dynamic, navigable environments, ensuring varied, coherent layouts and deterministic seed-based randomization.
- **Robot Evolution (C++):** Created a robot simulation with evolutionary algorithms, map generation, and sensor-based decision-making for environmental optimization and reproduction.
- **ActionMap (Ruby on Rails):** Built features to find/rate representatives & news; integrated Google Civic/Geocodio + News API with ENV-based secrets; added "Issue" taxonomy and a 2-step article selection flow; fixed nested routes/HAML for create/edit.
- **Quality & CI:** Wrote RSpec request/model tests with WebMock; set up GitHub Actions; enforced RuboCop/Haml-Lint; raised app coverage to ~100% with all linters passing.
- **Circuit Design:** Designed and built a Treble Boost Effect Box using op-amp active filters; calculated and implemented high-pass filter components, measured frequency response, and optimized gain to enhance high-frequency audio signals.

SKILLS

- **Programming Languages:** C/C++, Python, Java, JavaScript, Ruby, Scheme, SQL
- **Web & Software Development:** Node.js, React.js, Express.js, MongoDB, Ruby on Rails, RESTful APIs, HTML/CSS, Git/GitHub, Agile/Scrum, RSpec, WebMock, GitHub Actions, RuboCop, Haml-Lint
- **Data & Statistical Tools:** Pandas, NumPy, SQL, data analysis & visualization
- **Hardware & Circuit Design:** Arduino, Op-Amp circuits, active filters, Treble Boost effects design, electrical harness construction
- **Software Applications:** AutoCAD, SolidWorks (basic), MATLAB (introductory), VS Code, Eclipse, IntelliJ IDEA
- **Other Tools:** Linux/Unix command line, Docker (basic), LaTeX, Microsoft Office Suite