Arsalan Ahmed

+1 (510)-766-4922 | arsalandoha@gmail.com | linkedin.com/in/arsalankk/ | Davis, California, United States

EDUCATION & AWARDS

Bachelor of Science, Electrical Engineering *Davis, CA*
University of California Davis *Expected Graduation - June 2025*

- **Relevant Coursework:** Digital Systems, Computer Architecture, Control Systems, Applied Machine Learning

Associate of Science, Electrical Engineering *May 2023*
Las Positas College *Livermore, CA*

- **Awards:** Dean's List (Fall 2021, Spring 2022, Fall 2022, Spring 2023), Highest Honors (3.5+ GPA)
- **Relevant Coursework:** Circuit Analysis, Physics I, Physics II, Physics III

RELEVANT EXPERIENCE

Robotics Production Intern *Sacramento, CA*
Barobo Inc. *Jun 2024 - Sep 2024*

- Read and interpreted process instructions, work orders, and reports; assembled mechanical components and soldered electronic boards for robots.
- Tested product functional performance to ensure conformance to specifications; handled the shipments of robots and related products; packaged with electronic and plastic components.
- Assisted in troubleshooting software issues, and supporting software integration with hardware components.

Laboratory Coursework *Davis, CA*
University of California Davis *Jan 2024 - Mar 2024*

- Conducted experiments with operational amplifiers to investigate their gain, bandwidth, and distortion properties under different configurations and operating conditions.
- Learned to apply software such as SPICE and CIS-Capture to simulate circuits before physically building them.

PROJECTS

Matrix Multiplier in Verilog *Jun 2024*

- Developed hardware-based matrix multiplication using a Multiple Access Control(MAC) unit, leveraging parallelism and high memory bandwidth for improved efficiency.
- Ensured proper synthesis and estimated hardware resources, including clock cycle time, memory usage, and logic gate count, to optimize performance and resource allocation.
- Conducted extensive testing and validation, achieving significant performance improvements over conventional software-based approaches.

RISC-V Assembly Programmer *Feb 2024*

- Developed two RISC-V assembly functions to compute the median value of an unsorted array, handling inputs of signed thirty-two-bit integers and array length.
- Generated and analyzed instruction and memory traces from function runs.

Handheld Console Design using Rasberry Pi *Jan 2024*

- Designed and engineered a versatile handheld portable PC capable of running Windows and retro console games.
- Utilized cutting-edge components including Rasberry Pi, compact battery, and common handheld parts.

Database Report Generator in C++ *Apr 2023*

- Designed and developed a Database Report Generator, utilizing advanced skills in data manipulation and visualization.
- Efficiently processed CSV files, transforming raw data into an understandable report available in both PDF and text files.

TECHNICAL SKILLS

Languages: C++, Python, HTML, MATLAB, LaTeX, Verilog, RISC-V
Tools: Microsoft Office, Adobe Creative, Davinci Resolve, OrCAD, Intel Quartus, Visual Studio, Eclipse IDE, MathWorks