

Alex Chen

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EDUCATION

University of Washington

Bachelor of Science in Electrical Engineering

Relevant Coursework: Digital Systems, Signal Processing, Embedded Systems, Power Electronics, Control Systems, Circuit Design

GPA: 3.89/4.0

Seattle, WA

Aug 2024 – May 2028

TECHNICAL SKILLS

Languages and Tools: VHDL, Python, C, Arduino, PCB Design, Altium Designer

Frameworks and Platforms: Raspberry Pi, FPGA, ARM, Xilinx Vivado, LabVIEW

PROJECTS

[Smart Grid Monitoring System](#) | *FPGA, Python, IoT*

- Developed real-time power monitoring system using FPGA-based design
- Implemented machine learning for power consumption prediction
- Created dashboard for real-time energy analytics

[Autonomous Drone Control](#) | *C++, ARM, Sensors*

- Built custom flight controller using ARM microcontroller
- Implemented PID control algorithms for stable flight
- Achieved 95% accuracy in autonomous navigation

[IoT Home Automation](#) | *Arduino, ESP32, MQTT*

- Designed wireless sensor network for home monitoring
- Created mobile app for remote control and monitoring
- Implemented secure communication protocols

RESEARCH EXPERIENCE

Research Assistant - Power Electronics Lab

University of Washington

Jan 2023 – Dec 2024

Seattle, WA

- Researching high-efficiency power converter topologies
- Developed novel control algorithms for DC-DC converters
- Published findings in IEEE Power Electronics Letters

WORK EXPERIENCE

Hardware Engineering Intern

Intel

Jun 2023 – Aug 2023

Hillsboro, OR

- Designed and tested PCB prototypes for next-gen processors
- Developed automated testing scripts for quality assurance
- Reduced testing time by 40% through automation

Electrical Engineering Intern

Tesla

May 2022 – Aug 2022

Fremont, CA

- Assisted in power systems design for electric vehicles
- Conducted thermal analysis of battery management systems
- Improved cooling efficiency by 25% through design optimization