Emma Johnson

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Education

University of Washington (GPA: 3.8/4.0) **June 2025**
Bachelor of Science in Electrical Engineering *Seattle, WA*
Relevant Coursework: Digital Signal Processing, Embedded Systems, Control Systems, Machine Learning
Clubs/Involvement: IEEE President, Robotics Club Member, Women in Engineering

Technical Skills

Languages: C++, Python, MATLAB, Verilog, Assembly
Developer Tools: Git, Visual Studio, Quartus, Xilinx Vivado, MATLAB Simulink
Technologies/Frameworks: TensorFlow, Arduino, Raspberry Pi, FPGA Design, PCB Design
Additional Skills: Agile Methodologies, Linux, SolidWorks, AutoCAD, Microsoft Office

Experience

TechCorp **May 2024 – August 2024**
Software Engineering Intern *San Francisco, CA*
- Developed new features for a cloud-based CRM system using Python and Django framework.
- Implemented RESTful APIs for data retrieval and integration with third-party services.

InnovateTech **June 2023 – August 2023**
Embedded Systems Engineer Intern *Austin, TX*
- Designed and tested firmware for IoT devices using C and embedded Linux.
- Collaborated with hardware engineers to optimize performance and power consumption.

Research Institute of Technology **September 2022 – May 2023**
Research Assistant *Seattle, WA*
- Conducted experiments to analyze power distribution networks for next-gen processors.
- Used MATLAB to simulate and optimize circuits for efficiency and reliability.

Research

UW Robotics Lab **January 2024 – Present**
- Developing algorithms for autonomous navigation of UAVs using computer vision and machine learning.
- Testing and refining models for obstacle detection and path planning in dynamic environments.

Projects

Smart Home Automation System | *Python, Raspberry Pi, MQTT, Home Assistant, OpenCV* **December 2024**
- Designed a scalable IoT system to control home appliances based on user preferences and environmental conditions.
- Implemented computer vision for facial recognition to adjust settings personalized for each household member.

Real-time ECG Monitoring System | *Verilog, FPGA, MATLAB, Bluetooth Low Energy (BLE)* **May 2023**
- Developed a low-power ECG monitoring device for continuous real-time monitoring and analysis.
- Integrated with a smartphone app to alert users and healthcare providers of abnormal heart rhythms.