WILLIS ERDMAN

2610 NW Overton St.   willis.erdman@gmail.com | (971) 386 – 6453
Portland, OR 97210 linkedin.com/in/williserdman | github.com/williserdman | williserdman.com

EDUCATION

CASE WESTERN RESERVE UNIVERSITY   Graduation May 2027.
B.S.E. in Electrical Engineering and Computer Science, **GPA 4.0/4.0***. Cleveland, Ohio.*

- Dean's High Honors. Studied at uc3m. Courses taken: Discrete Math, Data Structures, Algorithms, Linear Algebra, Differential Equations, Physics, Circuits, Digital Logic Design.

EXPERIENCE

PORTLAND STATE UNIVERSITY   June – Sep 2024.
Research Intern, Department of Electrical and Computer Engineering (MCECS). Portland, Oregon.

- Developed and deployed machine learning models to predict coffee roast specifications with 95% accuracy by analyzing unique gas signatures and RADAR-based fingerprinting data.
- Created a data pipeline for APRS telemetry and Meshtastic sensor data using SvelteKit and Chart.js.
- Reduced packet sizes by 75% for transmission efficiency and improving real-time data visualization.
- Developed Raspberry Pi 5 and Pico-based environmental sensor networks using an IoT framework.
- Enabled data transmission across locations 50km from civilization for environmental monitoring.
- Developed an advanced balloon ascent simulation leveraging NOAA meteorological data to model wind pattern variations with altitude, enabling highly accurate predictions for flight trajectories.

ASIACOM AMERICAS   June – Sep 2023.
Data Center Technician. Hillsboro, Oregon.

- Led a team of 5 in identifying and resolving 10+ common installation issues.
- Conducted comprehensive quality assurance on TikTok and Bytedance servers before installation.
- Executed post-assembly maintenance on over 30 server racks (weekly) to address issues after delivery.

STARBUCKS   June 2021 – Nov 2022.
Barista. Portland, Oregon.

- Collaborated with a 10-person team to achieve shared goals.
- Created a positive customer experience for upwards of 50 customers an hour.

AWARDS AND ACTIVITIES

COLLABORATIVE CODING CWRU – TEAM LEAD   Sep 2023 – present.

- Directed the end-to-end design and development of an advanced system, strategically aligning team roles with individual expertise to maximize productivity and innovation.
- Established a structured roadmap with clear, outcome-focused milestones, ensuring the team consistently met and exceeded project timelines and quality benchmarks.

VTOLCWRU – DESIGN, BUILD, FLY COMPETITION   Sep 2023 – present.

- Designed and integrated flight control systems, including sensor arrays, navigation electronics, and communication modules, enabling precise autonomous navigation through a 400-yard circuit.
- Conducted detailed PCB design for avionics using KiCAD, considering weight and size constraints.
- Integrated wireless communications systems, enabling live off-board compute during flights.

WON CITADEL LLC / CITADEL SECURITIES' `terminal` CODING COMPETITION. Sep 2023.

- Developed a competitive agent for a real-time strategy tournament, optimizing for limited compute time and memory usage to enhance performance under constraints.
- Conducted rigorous testing on 15 different models, ultimately optimizing the agent to utilize the allotted 5 seconds of compute per turn, significantly improving efficiency.
- Implemented advanced AI techniques to track moves, allowing adaptive responses during gameplay.

SKILLS AND LANGUAGES

- English (native); Spanish (native/fluent).
- C++, Java, Python, R, TypeScript/JavaScript/HTML/CSS, MATLAB, SystemVerilog, SQLite, Firebase, Git. Soldering, PCB design, SOLIDWORKS/Fusion 360, MultiSim. PyTorch. Linux.

OTHER

- FCC Amateur Radio Service Operator – Technician Class.
- Also interested in travel, hiking, and soccer.