

# WILLIS ERDMAN

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Technically skilled candidate with hands-on experience in machine learning, wireless sensors, and data optimization, seeking to apply engineering and leadership expertise.

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## EDUCATION

### CASE WESTERN RESERVE UNIVERSITY

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

- Studied abroad, completing a rigorous sequence in mathematics and physics, as well as specialized courses in circuit design and core computer science topics.
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## EXPERIENCE

### PORTLAND STATE UNIVERSITY

*Portland, Oregon – Research Intern, Department of Electrical and Computer Engineering (MCECS). Summer 2024.*

- Developed and implemented machine learning models to accurately predict coffee roast specifications based on unique gas and RADAR fingerprinting data; achieved a 95% prediction accuracy, with goals to optimize roast consistency.
- Designed and optimized data pipelines to decode and visualize APRS telemetry and Meshtastic sensor data using SvelteKit and Chart.js.
- Reduced packet sizes by 75%, enhancing transmission efficiency and improving real-time data visualization.
- Developed and deployed Raspberry Pi 5 and Pico-based wireless sensor networks for real-time environmental monitoring using an IoT framework.
- Enabled efficient data collection and transmission across remote locations to enhance environmental insights and system scalability.

### ASIACOM AMERICAS

*Hillsboro, Oregon – Data Center Technician. Summer 2023/24.*

- Led a team of 5 in identifying and resolving 10+ common installation issues, streamlining the installation process, and improving overall project efficiency.
- Conducted comprehensive quality assurance on *TikTok* and *Bytedance* servers before installation; ensured seamless deployment by identifying and resolving potential issues, leading to improved server reliability and uptime.
- Executed post-assembly maintenance on over 30 server racks (weekly), ensuring optimal performance and addressing any issues after delivery, which improved system reliability and minimized downtime.

### STARBUCKS

*Portland, Oregon – Barista. June 2021 - Nov 2022.*

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

### VTOLCWRU – DESIGN, BUILD, FLY COMPETITION SPRING 2024 – 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 telemetry and communications systems, enabling live data transmission and remote monitoring during test flights.

### OTHER

- Won Citadel LLC / Citadel Securities' `terminal` coding competition (2023).
- FCC Amateur Radio Service Operator – Technician Class.
- Also interested in travel, hiking, and soccer.