Max Leblang

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EDUCATION

University of Wisconsin - Madison
Bachelor of Science, Computer Engineering   December 2025
GPA: 3.97/4.00
Selected Coursework: Operating Systems, Introduction to Robotics, Embedded Microprocessor System Design

ENGINEERING EXPERIENCE

Delve   Madison, WI
Embedded Systems Engineering Intern   May – August 2025
- Led the development and integration of production-grade firmware for an ESP32 wearable leveraging the LVGL graphics library, managing full product lifecycle from conception through building 50 units for client usability testing
- Developed critical bare-metal C drivers for an RFID reader and dual SD card reader system, ensuring seamless hardware-software integration and reliable data storage capabilities for medical-grade application requirements
- Engineered BLDC motor firmware, power architecture, and user interface, collaborating across mechanical and industrial design teams to meet industrial-grade torque requirements

Optimal Ticketing   Madison, WI
Backend Software Engineer   January – May 2025
- Scaled integration app from prior internship to handle high throughput syncing of 10,000+ accounts in less than a minute

Backend Software Engineering Intern   June – August 2024
- Designed and built a real-time ticket data integration app in Python that reduced transaction reconciliation time by 160 hours per month by syncing purchase and inventory data across multiple API endpoints
- Increased production data sync throughput by 80% by multithreading API calls, requiring extensive system-wide data validation and logging to ensure data reliability

Paperless Parts   Boston, MA
Computational Geometry Software Engineering Co-op   January - June 2023
- Automated the detection and healing of geometric problems in uploaded customer files that increased customer's ability to finalize cost estimates by 7% through computational geometry APIs in Python and C++
- Assisted in increasing platform-wide file size ingestion capacity by 4x by enabling the transfer of files through API calls

RESEARCH EXPERIENCE

WISION Lab, UW-Madison   Madison, WI
Computer Vision Research Engineer   September 2024 – May 2025
- Improved user adoption by developing comprehensive documentation and usability improvements for Visionsim, an open-source sensor emulation library used in computer vision benchmarking
- Supported refactoring of Python CLI workflows to improve clarity and reproducibility across research experiments

Wisconsin Embedded Systems and Computing Lab, UW-Madison   Madison, WI
Machine Learning Research Engineer   September 2023 – June 2024
- Designed a multi-headed CNN in TensorFlow that classified 4 distinct behaviors across 10 cows with an accuracy of 96%
- Led deep learning development for dairy cow health prediction paper (in collaboration with two grad students), focusing on time-series behavior modeling

PROJECTS

SmartMigrate, *Transcend UW Competition*
- Awarded Best Prototype and Demo at 2025 Transcend UW Competition
- Designing scalable multilingual AI assistant using LangChain/LangGraph in Next.js, helping migrants complete asylum applications in 20+ languages.

FPGA Knights Tour, *Digital System Design and Synthesis*
- Fully implemented and validated the digital logic for UART and SPI protocols, PID motor control, and optimal traversal algorithm to the Knights Tour problem on a 5x5 board using SystemVerilog

LEADERSHIP ROLES

Teen Leadership Program Coordinator, *Camp Kesem at UW-Madison*
VP of Recruitment/ VP of Social Events, *Delta Kappa Epsilon Fraternity*

TECHNICAL SKILLS

Python, C/C++, SystemVerilog, Git, Linux, FreeRTOS, ROS2, STM32, PSoc6, Altium, Solidworks, SPI, I2C, LVGL, TensorFlow