Max Leblang

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EDUCATION

University of Wisconsin - Madison December 2025
Computer Engineering B.S. GPA: 3.96/4.00
Selected Coursework: Operating Systems, Introduction to Robotics, Digital System Design and Synthesis

SKILLS

Programming Languages: Python, C, C++, SystemVerilog, MATLAB
Software Tools: Linux, ROS2, FreeRTOS, Git, Jira, REST APIs, Pandas, SQLAlchemy, TensorFlow

WORK EXPERIENCE

Optimal Ticketing Madison, WI
Backend Software Engineer January 2025 - Present

- Improving customer purchase fulfillment management system by syncing ticket listings and customer purchase data across multiple API endpoints in real-time

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 **multi-threading** API calls, requiring extensive system-wide data validation and logging to ensure no data was missed between syncs

WISION Lab Madison, WI
Computer Vision Research Engineer September 2024 – Present

- Developing an **open-source** Python simulation library that emulates various sensors for computer vision scene-flow, depth, and segmentation ground truth generation
- Enhanced API scene generation with image and pose interpolation functionality by refactoring image and spline transforms data pipelines

Wisconsin Embedded Systems and Computing Lab Madison, WI
Machine Learning Engineer September 2023 – June 2024

- Took primary ownership over the deep learning section of a paper that utilizes the MMCOWS dataset to track and predict dairy cow heat illness in collaboration with a team of two graduate students (paper on the way)
- Built a sliding-window data preprocessing pipeline to segment over 61M data points for training
- Designed a multi-headed CNN model in TensorFlow that classified 4 distinct behaviors across 10 cows with an accuracy of 96%

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 estimate costs by 7% by implementing computational geometry APIs in Python and C++
- Based on previous success enhancing CAD file processing, increased file size ingestion capacity by 4x across the entire platform by refactoring a C++ file conversion microservice to enable the sharing of files through API calls

PROJECT EXPERIENCE

FPGA Knights Tour September – December 2024

- Programmed a **fully autonomous** robot to solve the Knights Tour problem in SystemVerilog
- Fully implemented the digital logic for 16-bit UART and SPI communication with peripheral devices, PID and PWM controlled motors, and the most **optimal solution** to the Knights Tour problem on a 5x5 board

LEADERSHIP EXPERIENCE

Teen Leadership Program Coordinator*, Camp Kesem at UW-Madison* September 2024 – Present
VP of Recruitment, *Delta Kappa Epsilon Fraternity* January – May 2023
VP of Social Events*, Delta Kappa Epsilon Fraternity* January – December 2022