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

WORK EXPERIENCE

Optimal Ticketing Madison, WI
Backend Software Engineer (part-time) January 2025 - Present
- Implemented a multithreaded ticket price synchronization service that maintained accurate, real-time pricing between internal system and external APIs
- 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 no data was missed between syncs

WISION Lab Madison, WI
Computer Vision Research Engineer September 2024 – Present
- Collaborating with graduate students from UW-Madison and Portland State University to develop an open-source Python simulation library that emulates various sensors for computer vision scene-flow and segmentation ground truth generation
- Improved CLI documentation and enabled more control over subprocess management by refactoring CLI code to support Tyro and Python's subprocess library

Wisconsin Embedded Systems and Computing Lab Madison, WI
Machine Learning Research 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 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

SmartMigrate March 2025 – Present
- Awarded $1,000 for Best Prototype and Demo at the 2025 Transcend UW Innovation Competition
- Built a scalable, multilingual AI assistant that supports over 20 languages by integrating OpenAI's Assistants API with a local translation microservice in a Next.js app

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

TECHNICAL SKILLS

Python, C, C++, SystemVerilog, MATLAB, Linux, ROS2, FreeRTOS, Git, Jira, REST APIs, Pandas, TensorFlow