

# Max Leblang

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## EDUCATION

**University of Wisconsin - Madison**  
**Computer Engineering B.S.**

December 2025  
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**

January 2025 - Present

- Implemented a multithreaded ticket price synchronization service that maintained accurate pricing between internal system and external APIs in real-time
- 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 help 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 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 by integrating OpenAI's Assistant 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

**Programming Languages:**

Python, C, C++, SystemVerilog, MATLAB

**Software Tools:**

Linux, ROS2, FreeRTOS, Git, Jira, REST APIs, Pandas, SQLAlchemy, TensorFlow