

# Mark Ruzicka

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## Education

University of Wisconsin – Madison

Expected Graduation: December 2025

**Bachelor of Science in Computer Science | Data Science | Economics**

GPA: 3.6 / 4.0

**Courses:** Advanced Algorithms and Data Structures, Introduction to Operating Systems, Machine Organization and Programming in C, Matrix Methods in Machine Learning, Discrete Math, Introduction to Cryptography

## Professional Experience

**Embedded Software Research | Morgridge** - Madison WI

September 2024 – Current

- Developed Python drivers with PySerial and PyModbus enabling real-time data communication between the specialized subsystems to the GUI
- Designed and implemented frontend/backend systems for the main control interface of an electron beam 3D printer, optimizing the user interface for a cleaner and more effective experience with Tkinter
- Established standardized code formatting and unit-testing practices to improve code readability and maintainability across the team
- Automated unit-testing and code format checks using GitHub Actions (CI pipeline), enhancing development efficiency and reducing manual errors

**Teaching Assistant | UW Madison CS Department** - Madison WI

January 2024 – Current

- Educated students on course material in one-on-one and classroom environments through methods of visualization, alternative perspectives, and outside resources
- Created and reviewed challenging assessments, including weekly quizzes and exams; thoroughly checked questions from fellow TAs to ensure accuracy
- Revised and streamlined project and lab instructions, making them more concise and user-friendly

**Automation Engineer Intern | Green Bay Packaging** - Green Bay WI

Jan 2023 – May 2024

- Automated the creation and deployment of remotely accessible screens that provided real time performance statistics from the paper machine to Engineers using Python
- Developed frontend visuals and backend tools with VBA, FactoryTalk Studio, and Logics tag-tracking software to increase the efficiency of paper machine production
- Created and managed Power BI reports using SQL to efficiently show accurate data for quality metrics and cost tracking to help inform critical paper machine tradeoffs

## Projects

**Madison Parking Ticket Website** - [www.parking-in-madison.com](http://www.parking-in-madison.com)

May – June 2024

- Developed and designed backend with JavaScript and Python to filter, manipulate, and allow user input to display requested information
- Wrote a Python program using Selenium to asynchronously collect data, allowing the page to provide users with up-to-date statistics
- Designed the webpage to be simple and intuitive for users to efficiently find relevant information
- Deployed and managed the website on a server using DNS & network firewall configurations

## **Electronics Diagnostics & Repair**

- Investigated the behavior of faulty electronics to diagnose problems and resell on consumer markets
- Repaired with soldering, hot air, and circuit continuity to replace damaged components and return devices to full functionality

**Languages:** Python, C, Java, R, JavaScript, VBA, SQL

**Libraries/Frameworks:** Pandas, Flask, Selenium, PyTorch, PySerial, PyModbus, Tkinter, React, NodeJS

**Tools:** Git, GitHub, GitLab, CI/CD, Socket.io, Azure, Google Cloud, AWS

**APIs:** Google Maps API, ChatGPT API