

# Kyle Poage

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## Education

### University of Wisconsin-Madison

B.S. Computer Science, B.S. Economics, Certificate in Mathematics

May 2026

3.83 GPA

### Relevant Coursework:

Operating Systems, Computer Networks, Database Management, Algorithms, Machine Organization, User Interfaces, Data Analytics, Linear Algebra, Combinatorics, Econometrics, Game Theory, Probability Theory

## Relevant Experience

### Software Engineer (Capstone Project)

Jan 2026 - Present

Capital One

Madison, WI

- Designing and deploying a cloud-native, event-driven fraud detection system on AWS to enable real-time transaction scoring and automated customer fraud alerts
- Developing a supervised machine learning model to generate calibrated 0–1 fraud risk scores while minimizing false positives and false negatives
- Implementing RESTful APIs to simulate transaction ingestion and enable end-to-end model evaluation

### Software Engineering Intern

May 2025 - Aug 2025

Whova, Inc.

San Diego, CA

- Owned the end-to-end development of a Related Conference Leads Dashboard, building full-stack internal tools using Django and React to centralize conference lead data for Sales
- Designed RESTful APIs with Django Rest Framework handling authentication, pagination, and business logic for internal tools used across multiple teams
- Built an automated Gmail API ingestion pipeline to process ~100+ inbound emails per week, creating structured leads in the database and eliminating manual entry for the Marketing team
- Identified performance bottlenecks in Django ORM queries to improve dashboard responsiveness and scalability

### Undergraduate Teaching Assistant

Sep 2024 - May 2025

UW-Madison

Madison, WI

- Held weekly office hours to assist over 600+ Programming III students with debugging, code structuring, and conceptual explanations in Java
- Guided students through debugging complex Java programs, emphasizing independent problem-solving and structured debugging strategies
- Supported students in configuring and troubleshooting Java development environments on GCP virtual machines

## Projects

### WSH - Custom Unix Shell | C, POSIX, Linux

Sep 2025 - Oct 2025

- Implemented multi-stage pipeline execution using fork, execv, dup2, and UNIX pipes, enabling concurrent interprocess communication across 120+ chained commands
- Developed built-in commands, PATH resolution, and dynamic data structures (hash maps for aliases, dynamic arrays for history) to support flexible command execution and persistent shell state

### TEL Real Estate | Python, Flask, React

Feb 2025 - Apr 2025

- Implemented a full-stack accessibility verification platform using Flask and React to validate short-term rental compliance
- Designed RESTful APIs in Flask to manage rental listings and validation workflows

### Poker Emulator | Node.js, WebSockets, JavaScript

Jun 2024 - Feb 2025

- Created a poker game using Node.js and WebSockets to concurrently play with friends online
- Implemented game logic and backend using JavaScript with an HTML and CSS frontend

## Technical Skills:

**Languages:** Java, Python, C/C++, JavaScript, SQL

**Frameworks & Libraries:** React, Django, Flask, Node.js, Redux

**Tools:** AWS, Docker, Git, UNIX/Linux