Education

# **University of Wisconsin-Madison**

Aug. 2021 - Dec. 2024

**B.S. Computer Sciences** 

Experience

Capital One Chicago, IL

Software Engineer Feb. 2025 – Present

- Full-Stack development on the Payments microservice in the Velocity Black platform.
- Developed frontend (React/React Native) and backend features using TypeScript across the stack, leveraging Stripe auth, VCN provisioning, and RabbitMQ within an event-driven architecture to support secure, scalable, and reliable payment flows.
- Created and launched a universal checkout/reservation feature across all horizontals, vastly reducing checkout times by eliminating the need for manual agent involvement and significantly improving the consumer experience.
- Delivered HSD/PCI encryption and redaction cross-service within Messaging to meet a compliance deadline implemented encrypted message storage within RDS and managed schema via Knex migrations.

Capital One Plano, TX

**Intern** Jun. 2024 – Aug. 2024

- Contributed to internal MLaaS Platform used that identifies anomalies for fraud detection. Data and insights from the platform save the company over \$600 million in potential losses.
- Created functionality for parameter sharing across ML workflows reducing redundancies and error in tool usage.
- Added typing within React UI and Python SDK while preserving backwards compatibility.

# **Enterprise Rent-A-Car**

Madison, WI

**Intern** May. 2023 – Aug. 2023

- Built ETL pipelines for analytics using Airflow; NestJS API to integrate Google Looker Studio in Angular app.
- Improved ML model precision by 6% using a shallow neural network model for model aggregation in PyTorch.

## **Wisconsin Institute for Discovery**

Madison, WI

### **Undergraduate Researcher**

Dec. 2023 - Sep. 2024

• Under Prof. Robert Hawkins, contributed to research bridging the gap between GenAI and human cognition.

Projects

#### **Swapper** | Go, React, TypeScript, RavenDB

Feb. 2024

- Won 1<sup>st</sup> place at RavenDB hackathon (out of 2000 participants) for virtual trading application.
- Developed full stack with features: spatial search, fuzzy search, user profiles, interactive messaging, and item/profile ratings.

Cryptify | Rust Jan. 2024

- Created and maintain open source library with 15,000+ downloads used to obfuscate Rust programs at runtime and at rest.
- Includes features to obfuscate source code directly with variable renaming and direct flow obstruction.

#### Distributed File Transfer | Python

Sep. 2024

Designed UDP-based file transfer protocol with custom packet format, addressing scheme, and packet reassembly.

### PranavBot | Node.js, AWS Lambda, API Gateway, ECR, CloudFront, Astro

Sep. 2023

• Built serverless chatbot with Lambda, ECR, and a fine-tuned LangChain model to answer questions on my website.

Leadership & Achievements

#### **Undergraduate Projects Lab Coordinator**

Dec. 2022 - Dec. 2024

• Hosted workshops, tech talks, and CS department-sanctioned events; provided tutoring to students.

### **MadHacks Organizer**

Feb. 2023 - Dec. 2024

3x organizer of the largest hackathon at UW-Madison (650+ applicants, 300+ attendees, \$15,000+ in funding)

## **GitHub Campus Expert**

Dec. 2023 - Dec. 2024

• Lead instructional workshops and represented GitHub within CS department of 3,000 students.

Skills