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**EDUCATION****University of Wisconsin – Madison**

Jan. 2025 - TBD

*MS, Computer Science***University of Wisconsin – Madison** | Cumulative GPA: 3.81/4.0

Aug. 2021 – Dec. 2024

*BS, Computer Science*

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**EXPERIENCE****Capital One**

Jun. 2024 – Present

*Software Engineer Intern**Plano, TX*

- Contributed to internal MLaaS Platform used for fraud detection, identifying anomalies, and data insights/analytics instrumental in saving the company over \$600 million in potential losses and overall revenue.
- Created functionality for parameter sharing across ML workflows reducing redundancies and error in tool usage.
- Developed functions in TypeScript and Python to recursively traverse and modify parameter schemas of component at runtime within React UI and Python SDK.
- Modernized codebase by adding typing while preserving backwards compatibility with legacy code.

**Integral**

May. 2023 – Aug. 2023

*Software Engineer Intern**Madison, WI*

- Created ETL pipelines for analytics using Airflow and developed API's in NestJS to integrate Google Looker Studio dashboards into the Angular app.
- Improved ML model precision by 6% by creating a shallow neural network model with PyTorch for model aggregation.
- Migrated ML infrastructure to the cloud and created scheduled SQL queries to retrieve model data.

**Wisconsin Institute of Discovery**

Dec. 2023 – Present

*Undergraduate Researcher**Madison, WI*

- Conduct research under Professor Robert Hawkins focused on bridging the gap between GenAI and human cognition.
- Developed multiple experiment applications with React and LangChain, data pipelines for result analytics as well as integrating error monitoring.

**University of Wisconsin-Madison**

Dec. 2022 – Present

*Undergraduate Projects Lab Coordinator**Madison, WI*

- Host workshops, tech talks, and CS department sanctioned events as well as providing tutoring to other students
- Created a real-time monitoring of lab occupancy by utilizing YOLOv7 on a raspberry pi with a discord integration.

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

Feb. 2024

- Won 1<sup>st</sup> place in RavenDB's prize track out of 2000+ participants.
- Developed a marketplace to exchange free items supporting user messaging, spatial searching, fuzzy search, user/item reviews, and more.
- Designed efficient data models, queries, and implemented programmatic generation of database indices and created a user-friendly interface with React to support user messaging, item filtering, and user profiles.

**Cryptify** | *Rust*

Jan. 2024

- Created an open-source procedural **macro crate** with 4,000+ downloads for run-time Rust obfuscation.
- Developed a cli tool to automatically insert macros from the library at random points into the source.
- Includes optional features to obfuscate the source code directly with variable renaming and control flow obstruction.

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

Sep. 2023

- Built a serverless chatbot for my website using AWS Lambda, ECR (Docker), and a fine-tuned LangChain model to answer questions about me on my portfolio website.

**MadHacks** | *Lead Organizer*

Sep. 2023

- Organized and advised multiple hackathons with 650+ applicants, 300+ attendees, and \$15,000+ in funding.

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**TECHNICAL SKILLS****Programming Languages:** Go, Java, Python, JavaScript, TypeScript, C, C++, SQL, HTML/CSS**Frameworks/Libraries:** React, React Native, Astro, Angular, Node.js, NestJS, Express**Infrastructure/Dev Tools:** AWS, Docker, Casandra, Spark, Kafka, GCP, Git, Github Actions, Linux, macOS, Windows