
EDUCATION**University of Wisconsin – Madison** | Cumulative GPA: 3.87/4.0

Aug. 2021 – Dec. 2024

Bachelor of Science, Computer Science

EXPERIENCE**Capital One***Software Engineer Intern*

May. 2024 – Present

Dallas, TX

Integral*Software Engineer Intern*

May. 2023 – Aug. 2023

Madison, WI

- Improved ML model precision by 6% by creating a shallow neural network model with PyTorch for model aggregation.
- Migrated ML infrastructure to GCP and created scheduled SQL queries to retrieve model data from MySQL.
- Created ETL pipelines using airflow to move data from MySQL, transforming it in BigQuery, and adding data as dimensions to the LookML model.
- Developed API's in NestJS to integrate Google Looker Studio dashboards into the Angular app.

Wisconsin Institute of Discovery*Undergraduate Researcher*

Dec. 2023 – Present

Madison, WI

- Conduct research under Professor Robert Hawkins focused on bridging the gap between GenAI and human cognition.
- Experiment with new generative agent memory architecture to help agents escape their LLM limitations.
- Developed multiple experiment Applications with React and LangChain, data pipelines for result analytics as well as integrating error monitoring.

University of Wisconsin-Madison*Undergraduate Projects Lab Coordinator*

Dec. 2022 – Present

Madison, WI

- Maintained our server infrastructure including a Kubernetes cluster and expanded our infrastructure capabilities by creating a real-time monitoring of lab occupancy by implementing a raspberry Pi.
- Created a real-time monitoring of lab occupancy by utilizing the YOLOv7 on a raspberry pi with a discord integration to help members know when the lab is open.

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

Feb. 2024

- Won 1st 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.
- 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 2,000+ downloads for run-time Rust obfuscation.
- Developed a cli tool to automatically insert macros from the library random points into the source.
- Includes optional features to obfuscate the source code directly with variable renaming and control flow obstruction.

PranavBot AI Chatbot | 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.
- Integrated chatbot into Astro/Tailwind frontend using API Gateway.
- Implemented CI/CD pipeline using GitHub Actions to automate AWS deployment on each successful build.

ACHIEVEMENTS AND LEADERSHIP**MadHacks** | Lead Organizer

Feb. 2023 - Present

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

GitHub Campus Expert | Leadership

April. 2024 – Present

Sous Chef - Organizer (Food for Thought) | Community Development

Jan. 2024 - Present

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