PRANAV DRONAVALLI

+1 913-260-1499 | Gmail | LinkedIn | GitHub | Website

EDUCATION

University of Wisconsin – Madison | *Cumulative GPA: 3.87/4.0*   Aug. 2021 – Dec. 2024
Bachelor of Science, Computer Science

EXPERIENCE

Capital One   Jun. 2024 – Present
Software Engineer Intern   *Plano, TX*
- Develop internal MLaaS Platform used for fraud detection, identifying anomalies, and data insights/analytics.
- Added typing to components within workflow and implicit conversion of field type to JSON Schema while preserving backwards compatability.
- Created functionality for parameter sharing across the entire workflow in React UI and within python SDK.

Entegral   May. 2023 – Aug. 2023
Software Engineer Intern   *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.
- Developed API's in NestJS to integrate Google Looker Studio dashboards into the Angular app.

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.
- 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   Dec. 2022 – Present
Undergraduate Projects Lab Coordinator   *Madison, WI*
- 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.
- Hosted workshops, tech talks, CS department sanctioned events as well as providing tutoring to other students

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 2,500+ 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 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.
- 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, React Native, Astro, Angular, Node.js, NestJS, Express
Infrastructure/Dev Tools: AWS, Docker, Casandra, Spark, Kafka, GCP, Git, Github Actions, Linux, macOS, Windows