# 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*    *Dallas, TX*

**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.
- 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**    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
- Maintained our server infrastructure including a Kubernetes cluster.

## 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.
- 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