# Girish Dodda

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## EDUCATION

**UNIVERSITY OF WISCONSIN - MADISON** Madison, WI

BS Computer Science, BS Data Science May 2025

Cumulative GPA: 3.75/4.0; Dean's List 2022-2023, 2025

**Relevant Coursework:** Data Structures & Algorithms; Computer Engineering; Artificial Intelligence; Data Management; Machine Organization; Operating Systems; Mobile Systems

## WORK EXPERIENCE

**Image Guided Therapy Research Lab led by Dr. Robert Jeraj** Madison, WI

Research Assistant Nov 2024 – Aug 2025

- Analyzed and generated comprehensive statistics from 87 patients' lesions and conducted optimal feature analysis through Python's Scikit-Learn and Statsmodels improving accuracy by 23% compared to existing models.
- Developed custom ETL data pipeline to automate pet scan image processing utilizing pandas and SQS saving over 2 hours daily of manual labor and reducing input errors

**Duo Arts** Remote

Full-Stack Developer Jun 2024 – Aug 2024

- Developed a web portal for artists to manage their artworks and commissions using C#, ASP.NET, and Knockout.js
- Created new scalable database system to store image and artist metadata utilizing SQL Server and .NET pgAdmin capable of handling over 200 requests per minute and storing 800GB+ of artist data
- Designed new REST API endpoints for transferring artist metadata between microservices utilizing .NET with robust data validation and automatic retries reducing request failures by 6%

**Wisconsin Messenger** Remote

Software Developer Jun 2024 – Nov 2024

- Developed over 8 Python-based web scraper workflows using beautiful soup to aggregate and standardize news articles.
- Fine-tuned a transfer learning LLM model (BERT) achieving 97% test accuracy for custom article categorization.

## PROJECTS

**MiniSpark**

- Designed and implemented MiniSpark, a simplified distributed computing framework in C inspired by Apache Spark.
- Built custom RDD abstractions and execution graphs to support lazy evaluation, transformation chaining, and dependency tracking reducing redundant CPU cycles by 24%
- Implemented multithreaded task scheduling using POSIX threads, locks, and condition variables to manage concurrent stage execution and ensure basic fault tolerance enabling near 100% CPU utilization and reducing idle core time.

**Jobbr - Job Board Scheduler**

- Designed and deployed scalable job scraper system to monitor 10+ company career pages using containerized AWS ECR Python scrapers scheduled via EventBridge and executed on ECS Fargate
- Built dynamic dispatcher and SQS-based queue with Lambda for parallel, fault-tolerant execution with retries and alerts
- Archived scraper logs and structured data to S3 with metadata in DynamoDB, enabling traceable job history and daily change tracking with custom email notifications

**DSync - Passcode App for Wear OS**

- Built an automated scraper and API to retrieve and serve Duo temporary passcodes on demand, with support for refresh triggers and low-supply detection logic.
- Integrated GitHub Actions for scheduled execution and on-demand scraping, reducing manual 2FA code retrieval effort by 90%.
- Made client apps in Chrome and Wear OS to securely deliver over 700 passcodes in under 300 ms per request.

**Ready, Set, Go! (St3am - Best Engineering & 2nd Best Overall)**

- Built a custom WiFi client-server system for real-time classroom polls and surveys using Arduino IoT nodes.
- Designed a pub-sub protocol supporting 50+ concurrent clients with <20ms avg latency and TCP-based failure recovery.
- Implemented real-time data aggregation and formatting to relay detailed responses to instructors in under 500ms per session.

## LEADERSHIP

**Hindu Yuva (Outreach and Marketing Officer)** Sept 2024 - May 2025

- Organized Hindu cultural events by collaborating with campus clubs and securing local catering services.

**Toys for Joy (Technology Lead - Member)** Oct 2024 - Current

- Built a website for a non-profit organization using JavaScript, HTML5, and CSS to showcase recent events.

## ADDITIONAL

**Technical Skills**: JavaScript; HTML 5; CSS; Java; Arduino(C++); Python; Tensorflow; Android SDK; Kotlin; Node.js; R; Git; Github; Jupyter Notebook; SQL; MongoDB; C; .NET; Torch; AWS (Lambda, SQS, ECS Fargate, S3, DynamoDB); AWS CDK