Pranav Dronavalli

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Education

University of Wisconsin - Madison — Madison, WI
Bachelor of Science in Computer Science, Mathematics 3.95/4.0 GPA — *Sep. 2021 – May 2025*

Blue Valley High School — Stilwell, KS
4.4 GPA, 35 ACT — *Aug. 2017 – May 2021*

Experience

Software Engineer Intern — May. 2023 – Present
Entegral (subsidiary of Enterprise) — *Madison, WI*

- Created ETL pipelines using airflow to move data from MySQL, transforming it in BigQuery, and adding data to LookML model
- 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 keras and adding it to the model aggregation
- Migrated ML infrastructure to the cloud, and created scheduled SQL queries to retrieve data from MySQL

Projects

GameBoy Emulator | *C, CMake* — June. 2023 - Present

- Implemented the entire GameBoy CPU instruction set in a reusable and modular way
- Created a Memory Management Unit that models the CPU's address space and handles all memory read/writes, program flags, and permissions
- Built a comprehensive CUnit testing suite and used CMake to automate the build process
- Developed a virtual GameBoy GPU (PPU) to render backgrounds, windows, and sprites and handle screen refreshes

Ad Impression Predictor | *Python, sklearn* — Oct. 2022

- Created a binary logistic regression model to determine if a user is likely to click on an ad with 92 percent cross-val accuracy
- Transformed feature columns after analyzing user data with sklearn transformers
- Utilized sklearn libraries for efficient fitting, scoring and preprocessing

People Counter | *Python, OpenCV* — Mar. 2023

- Increased UPL participation by creating a People Counter which lets people know when the lab is open to the public
- Utilized the YOLOv7 model on a Raspberry Pi to count people in the lab with discord server integration

Double Encrypter | *Node.js, GCP* — Dec. 2022

- Self-implemented a RSA algorithm and used Google's cloud translate API as a second layer of obfuscation for a Hackathon project

Orginizations

Undergraduate Project Lab Coordinator — Mar. 2023 – Present
University of Wisconsin-Madison — *Madison, WI*

- In charge of supervising the lab, allowing students to use our hardware, and helping members with classwork
- Maintaining our server infrastructure including a kubernetes cluster and expanding our infrastructure capabilities
- Organizing computer science related events for students including: tech talks, workshops, and most notably hackathons with over 300 participants

Volunteer Experience

Youth Scratch Club Leader — Sep. 2022 – June. 2023
Glenn Stephens Elementary — *Madison, WI*

- Led an after-school Scratch club at an elementary school which introduced kids to computer science
- Designed a weekly curriculum to teach kids the fundamentals of programming

Technical Skills

Languages: Java, Python, C/C++, JavaScript, TypeScript, SQL, OCaml, HTML/CSS, R
Frameworks: React, Angular, Node.js, NestJS, Flask
Developer Tools: Git, GCP, VS Code, PyCharm, IntelliJ, Eclipse
Libraries: pandas, tidyverse, NumPy, Matplotlib, TensorFlow