Darin Peries

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Education

BS: Texas A&M University, College Station, Texas
Junior Computer Engineering, Brown Engineering Honors, GPA 3.6. Graduating May 2025.

Skills

Programming Languages: Java, C++, Typescript, Python
Frameworks and libraries: Pytorch, Angular, React, Spring Boot, SKLearn, matplotlib, PIL.
Technologies: Docker, AWS IOT, Make file, Apache Kafka, Mongo dB, Linux, git
Hardware: Raspberry PI

Work Experience

Ansys

Semiconductor Research and Development intern   *May 2024-August 2024*
- Implemented a novel computer vision algorithm with Pytorch to assist Ansys' Redhawk-SC's parasitic extraction engine in identifying and extracting new and advanced customer designs.
- Modified the extraction engine's circuit resistance calculation to better accommodate the customer's needs.
- Implemented a new file parser interface, which uses the Rapidjson library to parse and generate data structures for all Ansys products to use.

Semiconductor Research and Development intern   *May 2023-August 2023*
- Created a visualization tool in Ansys' Redhawk-SC that customers can use to view and analyze the different metal and silicon layers of their design using python PIL and matplotlib.
- Enhanced a machine learning algorithm within Ansys' Redhawk-SC's extraction engine to provide better performance to the customer during the runtime of the product.
- Used an incremental learning algorithm to enhance the product's multilayer perceptron predictions.

Hewlett Packard Enterprise

Software Engineering Intern, Full stack Developer   *June 2022-August 2022*
- Joined another intern and spearheaded the creation of a prototype microservice that could be used by the team for future development.
- The project was done to solve a scalability issue the team was facing with their existing application. Ran 70% faster than the previous application.
- The backend was implemented with Java and MongoDB while the frontend was created with the React JavaScript library.
- Designed a new dashboard for an internal team which interacts with an existing monolith application using the Angular TypeScript framework.

Projects

Data Structures and Algorithms Class Project   *April 2022-May 2022*
- Created a class in C++ to instantiate a graph data structure from user input
- Ran Dijkstra's and Prim's algorithm as optional functions
- Used a Priority Queue and an adjacency list to have an efficient runtime
https://github.com/dperry17/221_project/

AWS IOT Temperature and Humidity Tracking project   *June 2021-August 2021*
- Developed programs to collect temperature and humidity data of my plants to prolong their life
- Connected sensors to a Raspberry PI device
- Sent data to AWS cloud using MQTT protocol and perform visual trending and predictive analysis using python libraries such as NumPy and pandas
https://github.com/dperry17/temperature_and_humidity_project

Research

- Currently writing a paper on the first ever Max-Flow algorithm implemented in GraphBLAS under the mentorship of Tim Davis at Texas A&M University.

Organizations/Leadership

Texas A&M Institute for the Development and Education of Asian American Leaders (IDEAAL)

Treasurer   *August 2022-present*
- Kept track of the organization's funds
- Organized profit shares to support local businesses as well as other fundraising events
- Helped raised over $1,000 for a local business in Bryan, Texas through one of these profit shares.