Michael Ding

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Education

Purdue University - B.S. in Computer Science, **3.6 / 4.0 GPA** 2022 - 2026

- Relevant Coursework: Introduction to the Analysis of Algorithms, Data Mining and Machine Learning, Data Structures and Algorithms, Problem Solving and OOP in Java, Programming in C, Computer Architecture, Systems Programming, Information Systems

Work Experience

IT Intern at UPS June - August 2024

- Engineered a full-stack web application using Pandas for backend data processing and React for the frontend, optimizing the management of security vulnerabilities across 50,000 records.
- Saved 10 minutes per company compliance report by designing dynamic filtering/editing features.
- Deployed the application across 17 teams.

IT Intern at UPS June - August 2023

- Developed an application to streamline asset owner identification, enhancing system efficiency and security.
- Filtered through 8,000 records across 3 databases to identify asset owners, using Microsoft Power Apps for the frontend and Power Automate for the backend.

Projects

FortuNBA NBA Statline Projection Tool December 2023 - May 2024

- Collaborated with a team of 3 to develop a tool that predicts NBA player statistics against any given team.
- Leveraged Python and Pandas to conduct in-depth data analysis using the NBA.com API and used the K-Nearest Neighbors algorithm to project stats based on season averages and previous matchups.
- Delivered predictions that were +/- 7.5% accurate to the true statline an average of 65% of the time by factoring in recent injuries and home/away games.

Unix Shell Interpreter March - April 2024

- Developed a shell interpreter in C++ capable of parsing and executing command line input using Lex and Yacc.
- Implemented features such as input/output redirection, pipes, and subshells, using gdb for debugging.
- Optimized file searching speeds using environment variables as well as wildcard and tilde expansions.

Memory Allocation Implementation January - February 2024

- Implemented a malloc-inspired memory allocator and deallocator in C++
- Used free lists and the sbrk() system call to handle different sizes of memory, ensuring efficient memory management.

Skills

- Programming Languages: Java, Python, C, C++, JavaScript, SQL, Assembly, HTML
- Tools: Linux, Git, Vim, Pandas, LaTeX, React, Node.js, MongoDB, Neo4j, MySQL
- Concepts: Machine Learning, Data Structures and Algorithms