Will Altman

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Education

The Ohio State University, Columbus, Ohio *Expected Graduation: Fall 2023*

Major: Computer Science and Engineering

GPA: 3.779/4.0, Dean's List

Relevant Coursework: Operating Systems, OS Lab, Computer Architecture, Programming Language Design, Compiler Design and Implementation, Low Level Programming, Data Structures and Algorithms

Languages: C, C#, x86-64 Assembly, MIPS, LUA, Python, Java, JavaScript

Activities: The Ohio State University Marching Band (Fall 2019 - Present)

Work Experience

Infoverity *Summer 2022, Summer 2023*

Analyst Intern

- Independently managed a JavaScript project designed to connect and sync issues between separate Jira instances. Researched, prototyped, and presented different APIs, architectural designs, security concerns, progress, blockers, and future goals in weekly scrum meetings with project stakeholders.
- Developed a suite of analysis tools in Python to parse and analyze two different versions of a database environment utilizing PANDAS and Fuzzy Matching and outputting detailed analysis and metadata.

Leonardo DRS *Summer 2021*

Software Engineering Intern

- Developed a multithreaded Java Swing application utilizing XML, sorting algorithms, regex, and object oriented design principles to recursively parse file directories and files for classified information utilizing keywords and allowed the user to perform file operations on specified keyword groupings.

The Ohio State University *Fall 2020 - Spring 2023*

Software Components Teaching Assistant

- Used strong interpersonal, communication, and teaching skills to enhance individual learning during lab periods and office hours with difficult topics such as recursion and data structures.

Projects

Compiler *Spring 2023*

- Designed and implemented a scanner, parser, and compiler for a subset of the C language.
- Implementation included basic C functionality (if-then, if-then-else, for, while, multi-dimensional arrays), type checking and a symbol table, generation of temporary variables and three-address code, and control flow analysis using a directed, acyclic graph.

File System *Spring 2023*

- Designed a file system based on the ext2 architecture of superblocks, directories, inodes, and data blocks by dissecting linux kernel source code to identify critical modules to analyze.
- The file system supports mounting and unmounting, file persistence after unmounting, "." and ".." for cd operations, up to 8KB of files, file removal and creation, hard links, permission and ownership, reading and writing, and memory freeing upon file deletion.

Scheduler *Spring 2023*

- Implemented a fair-share scheduling algorithm and profiling code that dumped process statistics and timestamps in the Linux kernel by finding and modifying relevant existing system calls and functions.
- Analyzed and presented the dumped statistics using Python and PANDAS for analysis to prove functionality.