Jonathon Sonneborn

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Education

University of Michigan, College of Engineering Ann Arbor, MI
B.S.E. in Computer Science, Minor in Electrical Engineering Expected Graduation: April 2024
GPA: 3.1

Technical Skills

Languages: C++, SystemVerilog, Java, JavaScript, HTML, SQL, Bash, Python, RISC-V
Tools: Git, Linux, Docker, sqlite3, Make, REST API
Frameworks: NCurses, React, Flask

Work Experience

EECS DCO Computer Consultant January 2023 - Present
University of Michigan, Ann Arbor
- Provided technical support to faculty, staff, and students on computer and networking issues
- Assisted in the setup and maintenance of computer labs and classrooms
- Managed user accounts and permissions on Windows and Linux systems

Projects

Fully Synthesizable P6 N-Way Superscalar Processor EECS 470 Computer Architecture
Collaborative Project with a team of 7
- Contributed to the development of a fully synthesizable Out of Order P6 N-way superscalar RISC-V processor, emphasizing high performance and efficient execution.
- Independently developed a visual debugger for the processor in C++, utilizing Ncurses to enhance debugging capabilities. Innovatively employed pipes for inter-process communication between the SystemVerilog code and the C++ code, enabling real-time data exchange.

Technologies Used: SystemVerilog, C++, Ncurses

Server Filesystem in C++ EECS 482/498 Intro to Operating Systems
- Engineered a server filesystem in C++ enabling client command processing via sockets. Implemented dynamic memory allocation for upgradeable reader-writer locks, facilitating multiple readers or exclusive writer access.

Technologies Used: C++, Sockets, Smart Pointers, Threads

Instagram Clone with React and JavaScript EECS 485 Web Systems
- Developed a client-side dynamic Instagram clone using React and JavaScript, featuring infinite scroll. Integrated a REST API and Flask for backend communication, with SQLite3 for database management.

Technologies Used: Python, JavaScript, React, SQLite3, Flask