Justin Almas

Atlanta, GA | justinaalmas@gmail.com | 678-725-2923 | justinalmas.com | linkedin.com/in/justin-almas
https://github.com/justin-almas

Education

Georgia Institute of Technology, MS in Computer Science May 2025 – May 2026

- **Specialization:** Computing Systems

Georgia Institute of Technology, BS in Computer Science August 2021 – May 2025

- **GPA:** 3.9/4.0
- **Threads:** Systems-Architecture, Devices
- **Coursework:** Design-Operating Systems, Advanced Computer Architecture, Processor Design

Projects

Xv6 OS Feature Extensions

- Enhanced the UNIX Xv6 kernel with new capabilities by implementing large file support, alternative scheduling algorithms, lazy zero-page allocation, copy-on-write forking, userspace threading, and file permissions using C and x86 assembly.
- Improved the OS's functionality for high-performance applications, addressing memory efficiency and expanding user-level features.

LC3 FPGA Implementation

- Recreated the Little Computer 3 (LC3) processor architecture using Verilog and the DE-10 Lite FPGA.
- Designed and developed key components including the ALU, register file, and finite state machine, adhering closely to the LC3 Instruction Set Architecture.

Experience

Senior Teaching Assistant - Computer Organization & Programming August 2023 – Present
Georgia Tech – Atlanta, GA

- Lead a rotating team of five members in developing weekly homeworks designed to reinforce students' knowledge of the course material.
- Co-teach a biweekly laboratory session for 70 students, enhancing their understanding of basic computer architecture, binary, the LC-3, assembly language, and C programming.
- Maintain a semester average of 2000 contributions on question asking platforms.

Software Engineer Intern June 2024 – Aug 2024
Walmart Global Tech – Bentonville, AR

- Utilized BigQuery SQL to extract and process large datasets with over 40,000 rows to analyze file transit times through processing pipelines.
- Collaborated with machine learning engineers by delivering processed data for real-time anomaly detection using Isolation Forest models.
- Developed Python scripts with Pandas to transform and refine large-scale data, leveraging it to address critical capacity and business inquiries.

Technologies

Software: C, C++, Java, Python, ARM, x86, RISC-V, Linux

Hardware: Verilog, VHDL, SystemVerilog, Quartus, Vivado, Mbed, RTOS, FPGA