Matthew Anderson

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Education

University of Texas at San Antonio
San Antonio

Pursuing a BS in Computer Science
Aug 2022 - May 2025

3.83 GPA

Awards and Honors

Dec 2022 **Academic Achievement**: President's List at University of Texas San Antonio

May 2023 **Academic Achievement**: Honor Roll at University of Texas San Antonio

Dec 2023 **Academic Achievement**: Honor Roll at University of Texas San Antonio

Technical Skills

Proficiency in	C/C++ | JavaScript/TypeScript | x86 Assembly (IA-32) | Python
Prior Experience in	Lua | Rust | Bash | Java | LaTeX
Professional Software	Neovim/Vi | Visual Studio | Visual Studio Code | Git/Github
Operating Systems	GNU Linux | Windows | MacOS

Project Experience

Encryption/Decryption Algorithm

IA-32 Inline Assembly

- Used SHA-256 to create an encryption and decryption program using Inline IA-32 Assembly
- Employed various bitwise operations on contents of a given file
- Exercised register addressing techniques to interface with the SHA-256 hash
- Harnessed bit masks to achieve otherwise impossible assembly instructions
- Utilized git and GitHub to manage version control and project organization

Caching Simulator

Python 3.12

- Simulated an L1 cache that supports any cache configuration specified by the user
- Depends on Adobe stack trace text files to parse and simulate cache accesses
- Provides information to the user after the simulation about the number of hits, misses, and clocks/instruction
- Created an automation framework for collecting and analyzing the results of hundreds of simulations
- Leveraged an Execution Service to achieve concurrent execution of simulations

Route Records Parser

C Language

- Created a dynamic CSV parser that allows the user to query a supplied CSV file
- Used dynamic memory allocation to create space for any given number of route record entries
- Utilized recursion to keep track of already existing flights and airline routes
- Allowed users to search for routes in the created route record database stored in memory
- Tracked project changes with git and GitHub