Matthew Little

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Education

University of Texas at Austin — Austin, TX

Bachelor of Science in Mathematics, Bachelor of Science in Computer Science — *Aug. 2022 – Present*

- Cumulative GPA: 3.97, Major GPA: 4.0
- Relevant Coursework: Linear Algebra, Data Structures and Algorithms (Elements of Software Design), Data Structures, Discrete Math, Computer Architecture, Real Analysis, Number Theory, Probability, Applied Statistics, Differential Equations, Calculus I-III, Organic Chemistry I and II, Psychology, General Chemistry, Biochemistry, Genetics, Operating Systems, Algorithms, Physiology, Energy Efficient Computing, Machine Learning

Experience

Undergraduate Learning Assistant — Aug. 2023 – May 2024

University of Texas at Austin — *Austin, TX*

- Guided students to understanding of Chemistry concepts using inquiry-based techniques
- Tutored students while leading supplementary Problem Sessions
- Worked directly with Professors, TAs, and LAs to ensure students' needs are met
- Provided complementary instruction to Drs. Biberdorf and Sparks' lectures for 250+ students

Undergraduate Course Assistant — Aug. 2024 – December 2024

University of Texas at Austin — *Austin, TX*

- Led discussion sections for 15+ students
- Utilized a variety of pedagogy techniques to enhance students' understanding
- Worked under Dr. Fares Fraij and with other TAs to ensure students' needs are met

Projects

Memory Manager — Mar. 2024

University of Texas at Austin — *Austin, TX*

- Created a dynamic memory allocator for C programs
- Maximized throughput and space utilization through implementation of splitting and coalescing of memory blocks

System Emulator — Apr. 2024

University of Texas at Austin — *Austin, TX*

- Implemented an emulator for an Arithmetic Logic Unit
- Simulated pipelining in a processor using a subset of the Arm Assembly Language
- Handled exceptions and hazards using strategies of squashing, stalling, and forwarding

PINTOS — Aug. 2024 - Dec. 2024

University of Texas at Austin — *Austin, TX*

- Implemented various aspects of the PINTOS operating system, including thread scheduling, memory management, and file system design.

Cloud Computing Simulator — Nov. 2023

University of Texas at Austin — *Austin, TX*

- Implemented scheduling algorithms for a simulated cloud computing data center
- Optimized for a balance of performance and energy efficiency

Skills/Awards/Interests

Technical Skills: Python, Java, VS Code, Data Structures and Algorithms, Object-Oriented Programming, LaTeX, C, Arm Assembly, R
Eagle Scout: Assistant Senior Patrol Leader for ∼150-200 member troop, streamlined troop events and service projects
Languages: Working Proficiency in Spanish
Individual Research: Studying Dummit and Foote's Abstract Algebra, Heavily Interested in Number Theory and Applications in Cryptography
Media Design: Very proficient in Adobe Premiere Pro, After Effects, and Photoshop