

PETER MOSES

Aspiring Systems and Performance Engineer

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EDUCATION

University of Texas at Arlington

Bachelor of Science in *Computer Engineering*

Maverick Merit Award Scholarship Recipient

Expected Fall 2026

Arlington, TX

Relevant Coursework:

- **Algorithms & Mathematical Foundations:** Data Structures & Algorithms, Linear Algebra, Probability & Statistics
- **Systems & Architecture:** Computer Architecture & OS, Digital Logic, Circuit Analysis, Signal Processing
- **Software Development:** Object Oriented Programming, C programming, Python

TECHNICAL SKILLS

Languages: C, C++, Python, Java, (System)verilog, MATLAB, Bash

Technologies: Git, Linux/Unix, GDB, Valgrind, Make

Concepts: Data structures, Algorithms, Computer Architecture, Operating Systems, Memory Management

PROJECTS

Custom Unix Shell, CSE 3320 homework project

September 2025

- Developed a custom Unix-like shell in C featuring robust process management using *fork()*, *execvp()* and *waitpid()* to execute external commands.
- Engineered support for multi-stage command **pipelines** (*|*) and **I/O redirection** through file descriptor manipulation.

Machine Learning for Handwritten Digit Recognition, OurCS@UTA

February 2025

- Built and trained a neural network using Python and **Keras** to classify handwritten digits from the MNIST dataset.
- Engineered a data pipeline to preprocess and normalize 28*28 pixel images for model training.

C++ Mathematical Expression Parser, Personal Project

December 2024- March 2025

- Engineered a parser in C++ to evaluate complex infix expressions by implementing the **Shunting-yard algorithm** to convert them to Reverse Polish Notation (RPN), correctly handling **operator precedence**.
- Designed an extensible engine supporting variable management and a range of mathematical functions.

Advanced Work Scheduler, Developer

Summer 2024

- Developed a terminal-based Java application to manage and automate employee scheduling based on employee availability using **object-oriented principles** and core data structures for efficient retrieval.
- Engineered secure user account creation with password masking and persistent data storage using file I/O.

WORK EXPERIENCE

Live by Loews Hotel, Lead valet

June 2023- Present

- Led valet team to optimize vehicle retrieval and staging processes, servicing over 300 guests during peak hours in a high-volume, time-critical environment.
- Ensured high customer satisfaction through **effective communication** and **proactive problem-solving** in a dynamic setting.

LEADERSHIP/ ORGANIZATIONS

CAHSI, Student Advocate

September 2024- May 2025

- Spearheaded outreach initiatives to disseminate technical workshops and career opportunities to students in the UTA CSE department.

Association for Computing Machinery, Member

January 2024- Present

- Contributed to a 10+ member team using Git to develop mavgrades.com, a full-stack web application for UTA course reviews and grades.