

Tyler J. McClelland

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SUMMARY

Computer Science Senior with a focus on high-performance systems, cybersecurity, and embedded work.

EDUCATION

B.S. Computer Science

May 2027

Arizona State University, Tempe, AZ

3.7 GPA

Relevant Coursework: Data Structures and Algorithms, Introduction to Software Engineering, Information Assurance, Applied Linear Algebra, Calculus III, University Physics I/II, Operating Systems, Intro Theoretical Computer Science, General Chemistry for Engineers

TECHNICAL SKILLS

Programming Languages: C/C++, Python, Java

Core Concepts: Data Structures & Algorithms, Memory Management, Object-Oriented Prog. (OOP), Computer Architecture

Tools, Databases, and OS: Git, GitHub/GitLab, Windows, MacOS, Linux/Unix, ida, PowerShell/Terminal, Wireshark

EXPERIENCE

Software Engineer Intern, General Dynamics

June 2026 – Present

- Working on software for space systems

Undergraduate Researcher, Logos Robotics Lab at Arizona State University

January 2026 – June 2026

- Trained and evaluated robotic policies, including ACT, Diffusion, and Vision-Language-Action (VLA) models using PyTorch and LeRobot
- Fine-tuned vision encoders on LIBERO benchmark, establishing performance metrics for distillation research
- Configured and executed distributed training jobs on an HPC cluster by developing bash scripts for SLURM job automation to train on A100 GPUs

PROJECTS

Algorithmic Trading System, *Personal Project*

Fall 2024

- Developed a Python based trading bot using **Pandas** and **CCXT** to execute an RSI and SMA crossover-based strategy
- Tested model viability using historical data by engineering a back-testing engine using Binance Testnet API
- Automated risk-management, **limiting losses to 1.5%** of a position size for every 4.5% in potential profit by implementing a stop-loss algorithm to sell a position when the 1.5% threshold is met

Flight Data Management System, *Class Project*

Fall 2025

- Engineered** a high-performance data management system in C++ using a **Red-Black Tree to guarantee $O(\log n)$** execution time for flight scheduling operations (insert, delete, search).
- Optimized retrieval speeds by building a custom Hash Table with collision chaining, reducing **average** lookup time to **$O(1)$** .
- Developed** a network routing module using Dijkstra's Algorithm and a custom Min-Priority Queue to **calculate optimal paths** between cities.

Autonomous Robot Navigation System, *Class Project*

Spring 2025

- Designed the robot chassis and wrote all control logic in MATLAB, integrating **one ultrasonic, one color, and one touch** sensor to navigate maze environments
- Led a 4-person team as project manager, establishing milestones and communication cadences that delivered the final system **2 weeks ahead of schedule**
- Maintained the GitHub repository, coordinating pull requests, ensuring accurate version control, and branching to ensure **zero critical integration issues** and full traceability of changes

Awards

Dean's List - Spring 2025, Fall 2025

May 2025 – December 2025

- Awarded the Dean's List award from the Ira A. Fulton School of Engineering at ASU for each semester attended

President's Honors List - Fall 2023, Spring 2024, Fall 2024 (Chandler-Gilbert Community College) August 2023 – August 2024