Maheer Jawwad

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Education

University of Texas at Arlington — Arlington, TX
Bachelor of Science in Computer Science — *Aug. 2022 – May 2026*

- GPA: 4.0/4.0
- Relevant Coursework: Algorithms and Data Structures, Object Oriented Programming, Artificial Intelligence, Operating Systems, Computer Vision, Machine Learning

Experience

Undergraduate Research Assistant — Jan. 2025 – Present
University of Texas at Arlington — *Arlington, TX*

- Developed **high-performance C++ data pipelines** for real-time video analytics, reducing processing latency by **30%** through lock-free queue optimizations.
- Implemented multi-threaded **REST API endpoints** (Flask/Python) with MySQL query optimizations serving 1,000+ requests/sec.
- Collaborated in Agile environment **(Jira, Git)** to deliver **low-latency solutions** for research team.

Biomedical Research Assistant — Aug. 2024 – Dec. 2024
UTARI — *Fort Worth, TX*

- Contributed to a **biomedical research project** integrating games with exercise equipment.
- Programmed real-time **game play mechanics** (Python) with **30% responsiveness** improvement, showcasing **low-latency systems** skills.
- Designed **SQL Server database schema** for 100+ player logs, emphasizing **data modeling/validation**.

Systems Administrator — Mar. 2023 – Aug. 2023
UTA Libraries — *Arlington, TX*

- Maintained high-availability systems (**95% uptime**), debugging **kernel-level drivers** for hardware peripherals.
- Conducted **workshops on C++ and Python programming** for web/app development, helping students build and debug own projects.
- Automated system monitoring via **Unix shell** scripts (**20%** efficiency gain), showcasing automation skills.

Projects

KalmanTrack | *Python, NumPy, OpenCV, TensorFlow* — Mar. 2025 – May 2025

- Built a real-time **vehicle tracking** using Kalman filters and a **custom CNN (TensorFlow)**, for a computer vision project, that has **98.8%** accuracy rate.
- Trained model on **50,000+ labeled frames** to calibrate motion thresholds and filter out noise, reducing false positives by **38%**.

Ready Oar Not | *Unity, Node.js, MongoDB* — May 2024 – Mar. 2025

- Developed a real-time leaderboard system using **RESTful APIs and MongoDB**, increasing player retention **by 25%**.
- Carried out **100+ debugging and QA tests**, reducing crash rates by **40%** and documented changes to maintain changelogs for future purposes.
- Created **real-time multiplayer backend** handling 500+ concurrent connections with **sub-5ms ping**.

Schedulink | *C, Linux Kernel, Git* — Sep. 2024 – Dec. 2024

- Developed a **ticket-based process scheduler**, implementing **multi-threaded fairness algorithms**.
- Optimized the kernel's process control flow **by 10%** to support ticket-based scheduling and random select.

Technical Skills

Languages: Rust, C/C++ (Linux kernel), Python (NumPy/TensorFlow), Java, JavaScript/HTML5
Frameworks: Node.js, React.js, AngularJS, Flask, Docker, Kubernetes
Operating Systems: Windows, MacOS, Linux (Ubuntu)
Cloud Platforms: Google Cloud Platform, Azure, Amazon Web Services
Tools: Git, Xcode, VS Code, Instruments, PyCharm, Eclipse