Nooraldeen Alsmady

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Education

University of Texas at Arlington — **Arlington, TX**
Bachelor of Science in Computer Science — **Expected Dec 2025**

Tarrant County College — **Fort Worth, TX**
Associate of Arts - AA, Mathematics and Computer Science — **May 2021**

Relevant Coursework: Machine Learning | Artificial Intelligence | Information Security | Operating Systems | Databases | Algorithms and Data Structures | Human-Computer Interaction | Compilers Algorithmic language | Software Testing and Management

Technical Skills

Languages: C, C++, Java, Python, JavaScript, Scala, SQL, HTML/CSS
Frameworks and Libraries: React, React Native, Streamlit, Unity, FastAPI, Vite, FAISS, scikit-learn
Testing and Debugging: JUnit, PyTest, troubleshooting, root cause analysis
AI/ML and Tools: OpenAI API, NLP, Embeddings, Vector Databases: FAISS
Tools: Git, GitHub, Windows, WordPress, Maven, Linux, Docker, Agile/Waterfall

Technical Experience

Team Lead — AR Wetlands Watchers — May 2025 – Present
University of Texas at Arlington (in partnership with the U.S. Army Corps of Engineers)
- Lead a 4-person team to design and develop an AR mobile app for environmental education in Unity.
- Coordinated sprints, requirements (SRS/ADS), and integrated 3D assets, delivering **100% of milestones on time**.

Full-Stack Developer — AI-Powered RAG Chatbot — Jul 2025 – Present
Independent Project
- Built a full-stack AI-powered RAG system with OpenAI NLP, FastAPI backend, and React/Vite frontend.
- Delivered a production-ready pipeline. Solving engineering challenges around batching, async jobs, CORS, and timeouts to deliver a production-ready pipeline.

Projects

SPL Compiler | *Scala, CUP, JFlex, MIPS* — Jan 2025 – May 2025
- Built a full compiler with scanner, parser, semantic analysis, and IR to MIPS translation.
- Validated compiler with **100+** test programs; improved error handling reduced crashes by **40%**.

Custom Memory Allocator | *C* — Jun 2024 – Dec 2024
- Implemented malloc, free, realloc, calloc with Next Fit, Best Fit, Worst Fit strategies.
- Reduced memory fragmentation by **25%** via block splitting/coalescing; benchmarked against `libc malloc`.

FAT32 File System Shell | *C* — Oct 2024 – Dec 2024
- Developed user-space FAT32 shell with commands: `ls`, `cd`, `stat`, `get`, `put`, `del`, `undel`.
- Improved file access reliability; handled **50+** edge cases without data corruption.

Best Price Groceries (DB System) | *MySQL, PHP, HTML/CSS/JS* — Jun 2024 – Nov 2024
- Designed EER diagram and converted to normalized schema; authored **30+** SQL queries and views.
- Built responsive web UI enabling CRUD operations for items, vendors, and customers.

Chronologist – Puzzle Platformer | *Java* — Aug 2024 – Dec 2024
- Developed a 2D puzzle game with time-rewind and gravity mechanics; playtested with **20+** users.
- Enhanced player retention by **35%** with polished UI, menu, and level selection system.

Unix Shell (msh) | *C* — Sep 2024 – Oct 2024
- Built Unix-like shell supporting interactive & batch modes with `cd`/`exit` and `execv`.
- Added process management and I/O redirection; executed **200+** commands reliably.

Experience

Towne Park — May 2022 – Jul 2025
Valet Captain
- Supervised valet operations at **4+** luxury hotels and fine dining venues while pursuing a Computer Science degree.
- Solved guest concerns with strong customer service and problem-solving skills.
- Trained and managed **10+** team members, cutting service delays by **20%**.

Private Math Tutor — Jun 2019 – Present
Self-Employed
- Tutored College Algebra, Linear Algebra, Precalculus, Calculus I, and Calculus II to high school and college students.
- Helped students improve exam performance by **1–2 letter grades** through personalized lesson plans.
- Built long-term client relationships, supporting **30+ students** since 2019.

Achievements

- Dean's List - Tarrant County College (Spring & Fall, consecutive semesters)
- Ford Driving Dreams Scholarship - Ford Motor Company Fund, North Texas
- Ione Buckner McAllister Scholarship - Awarded for Academic Excellence