#### Mohamad N. Alkhateeb

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### **EDUCATION**

### The University of Texas at Arlington.

# Arlington, Texas

B.S. in Computer Science

Expected Graduation, Dec 2025

- Concentrations: Artificial Intelligence, Data Systems, and Big Data Analytics.
- o **GPA**: 3.44
- Completed Coursework: Data Structures & Algorithms, Software Design, DBMS Models and implementation,
   Machine Learning, Artificial Intelligence, Object-Oriented Programming, Operating Systems, and Information Security,
   and Operating Systems.
- Student Organizations: Engineering Challenge Club, Leadership Honors Program.

### TECHNICAL SKILLS

- Programming Languages: Java, Python, SQL, php, C/C++, Kotlin, JavaScript, HTML, Swift, ARM Assembly.
- Development Environments: Linux, Unix, Ubuntu, Android Studio, Node.js, Valgrind, Visual Studio, Eclipse.
- Methodologies: Agile, Waterfall, Scrum.
- Other Tools: Git, StarUML, Shell, Makefile, phpMyAdmin, SQLite Studio, Figma, Hadoop, GDB, COCOMO.

#### WORK EXPERIENCE

### Valvoline Express Care

Operation Manager/Front Desk

Arlington, Texas

May 2024 – Present

- Maintained customer management software, ensuring accurate data entry and efficient retrieval for optimized service.
- Resolved technical issues with the shop's software, showcasing problem-solving skills and attention to detail.
- Built and maintained strong client relationships, leading to a 95% customer retention rate.

American Wholesale Dist.

Arlington, Texas

Operations Manager

May 2022– Aug 2023

- Implemented cost-effective inventory management strategies, saving the company \$50,000 annually.
- Tracked customer trends and optimized workflow efficiency through system report and data-driven decisions.
- Managed a team of 15+ employees, achieving almost 98% on-time delivery rate.

### **TECHNICAL PROJECTS**

# CNN Augmentation Analysis - Image Classification Performance Study

Arlington, Texas

Team Lead *Apr 2025 – May 2025* 

- Built and trained baseline and augmented CNNs on CIFAR-10 using PyTorch and torchvision.
- Evaluated model performance using accuracy plots, confusion matrices, and per-class analysis.
- Achieved +1.7% test accuracy improvement through augmentation with crop, flip, and jitter.

### IMDb Data Analysis using Hadoop and SQL

Arlington, Texas

*Mar* 2025 – *Apr* 2025

- Developed Hadoop MapReduce jobs to analyze IMDb data and extract genre-based movie trends over three decades.
- Implemented SQL queries on a large-scale Oracle database (~50M rows) to retrieve top-rated films with genre filters.
- Visualized genre trends across decades using Python with pandas and matplotlib to process and plot MapReduce output.

# **Transaction Manager – Concurrency Control Simulation**

**Arlington, Texas** 

Team Lead

Team Member

Team Lead

Team Member

Feb 2025 – Mar 2025

- Implemented a transaction manager in C to simulate concurrency control using strict two-phase locking (S2PL).
- Handled transaction operations (begin, read, write, commit, abort) with thread synchronization using semaphores.
- Ensured correct execution order and isolation by managing shared/exclusive locks.

### B+ Tree Implementation: Index File Organization for DBMS MINIBASE.

Arlington, Texas Jan 2025 – Feb 2025

• Implemented a B+ Tree index for efficient data management in a database system using Java.

- Handled key operations such as insertions and deletions, enhancing system performance.
- Applied theoretical concepts practically, improving query response times and scalability

# QuickFin: Financial Helper App

Arlington, Texas

Aug 2024 – Dec 2024

- Developed QuidkFin, an Android app in Kotlin, providing diverse financial calculations.
- Integrated investment calculator, currency convertor, savings advisor, and more to enhance financial decision making.
- Collaborated within a team to integrate features seamlessly and optimize QuickFin's performance using agile method.
- App demo: Application Demonstration

# **BestPriceStore: Database & Website**

Arlington, Texas

Team Member Aug 2024 – Dec 2024

- Designed an ER diagram to model the database for a store called "Best Price Store" using SQL.
- Designed a database for the website using SQL to support querying, adding, and updating records.
- Built a dynamic PHP-based store website, managing inventory and transactions with database integration.