Ceasar Attar

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY — **Atlanta, GA**
Master of Science in Computer Science, *Specialization in Artificial Intelligence* — *Expected May 2027*

UNIVERSITY OF ILLINOIS AT CHICAGO — **Chicago, IL**
Bachelor of Science in Computer Science — *2021 - 2025*
52nd Annual Chancellor's Student Service and Leadership Award Recipient

TECHNICAL SKILLS AND CERTIFICATIONS

Skills: Embedded Systems, Microcontroller Programming, DB Optimization, Performance Profiling, Workflow Automation, System Debugging
Certifications: Foundations of Security (Google), Responsive Web Design (freeCodeCamp), Back End Development and APIs (freeCodeCamp)
Languages: C, C++, Python, Java, C#, Go, JavaScript, TypeScript, R, SQL, F#, Ruby, VBA
Developer and Design Tools: Git, GitHub, Jira, Postman, FileMaker, HTML, CSS, Arduino, Docker, Figma, RStudio, Altair AI Studio
Frameworks & Technologies: AWS, MySQL, React, Hibernate, RESTful API, Spring Boot, PostgreSQL, Azure, Kafka, Node.js, Express.js

PROFESSIONAL EXPERIENCE AND INVOLVEMENT

Raila and Associates — **Chicago, IL**
Database Management Analyst — *May 2025 — Present*

- Analyzed performance bottlenecks and instability in legacy VBA components, improving consistency across core workflows.
- Built Python scripts and structured queries to automate repetitive operations, reducing error rates and manual processing time.
- Conducted systematic validation of data workflows, identifying edge-case failures and reinforcing system reliability.
- Migrated a high-volume query engine from legacy infrastructure to FileMaker, enabling efficient data computation across 2M+ records.
- Optimized database schemas, indexing, and concurrent batch query execution to reduce latency and improve overall data throughput.

Digital Cash for Information Technology — **Amman, Jordan**
Back End Cybersecurity Intern — *May 2024 — August 2024*

- Enhanced API performance by profiling behavior under load and applying targeted optimizations to resolve bottlenecks.
- Optimized backend infrastructure to support CI/CD pipelines for scalable and high-volume data workflows, reducing system latency.
- Implemented lightweight RSA and AES-GCM encryption protocols for API transaction security, validated through comprehensive testing.
- Collaborated with engineers to reproduce defects and verify fixes, gaining experience in structured debugging and validation workflows.
- Increased throughput in distributed backend workflows by optimizing connection pooling, cache utilization, and multi-threaded pipelines.

Association for Computing Machinery — **Chicago, IL**
University of Illinois Chapter — *September 2023 — May 2025*

- Performed systems engineering to ensure 99% server uptime for student projects and chapter-hosted events.
- Mentored junior members in fundamental software engineering practices, contributing to higher project quality and collaboration.
- Organized technical workshops on API development, enabling students to gain practical experience in GraphQL and REST.
- Supported special interest group (SIG) events and projects, promoting diverse computing interests across the chapter.
- Boosted recruitment and engagement through social events and hackathons, increasing membership growth and promoting collaboration.

TECHNICAL PROJECTS

Smart Alarm Clock — Embedded System | *Arduino / C++*

- Developed firmware in C++ for an Arduino-based alarm system, integrating temperature and light sensors via ADC for timed triggers.
- Debugged signal noise, jitter, and timing drift using serial logging and calibration, improving accuracy by 30% and reducing latency.
- Worked with hardware timers, ADC sampling, and I²C communication to coordinate sensor input and display output.

Musical Mood Analyzer — Machine Learning Pipeline | *Python / Scikit-learn / XGBoost*

- Built a machine learning system using Pandas and NumPy to preprocess Spotify audio features for mood classification.
- Trained multiple models, including Logistic Regression, Random Forest, and XGBoost, achieving 75% accuracy in predicting song mood.
- Applied StandardScaler and LabelEncoder in Scikit-learn to standardize features and optimize model convergence for mood classification.

Encrypted Messaging System — Multi-threaded Architecture | *Java / MySQL*

- Developed a secure communication system using object-oriented design OOD principles and integrated JUnit test cases.
- Built a multi-threaded architecture to handle high-frequency real-time communication, ensuring low-latency performance.
- Optimized database queries with Hibernate, improving read/write efficiency across high-traffic message storage.