Osama Azab

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SUMMARY

Motivated senior computer science student seeking a co-op research internship. Strong foundation in AI, data engineering, and full-stack development. Proven ability to execute technically demanding projects and contribute meaningfully to academic work.

EDUCATION

Aug 2021 — Dec 2025

BSc. in Computer Science, Prince Sultan University   Riyadh

Relevant Coursework: Design & Analysis of Algorithms, Databases, Distributed Systems, Data Science, NLP, Linear Algebra, Calculus, Web Engineering.

PROJECTS

Makhtotah Research Project — *Senior Graduation Project (Ongoing)*
Improving OCR accuracy on Arabic historical documents using deep learning and classical binarization methods. Includes dataset collection, experimentation, and evaluation.

Makhtotah Platform — *AthkaU Competition*
Developed an OCR-based web app to digitize Arabic manuscripts using Python, Flask, and Azure Vision. Enriches extracted text with LLM-generated insights.

OCR/HWR Implementation — *NLP Course Project (CS476, Ongoing)*
Implementing an OCR/HWR by finetuning Qwen2 on Arabic data. Collecting datasets, generating synthetic data, and implementing preprocessing and evaluation pipelines.

Cyberattacks Real-Time Detection — AI in Cybersecurity *Course (Ongoing)*
Designing ML models for detecting DGA/Botnet/DDoS attacks using DNS and traffic logs. Building a real-time threat detection dashboard with live data ingestion.

Streams Platform — *Database Systems Project (CS340)*
Full-stack .NET + React app demonstrating SQL and schema design. Built a web scraper to populate demo data. Selected as a model project for future course sections.

Hadoop Cluster — *Distributed Systems Project (CS435)*
Deployed an 8-node Hadoop cluster across 2 machines. Tested performance on Pi Calculation, WordCount, and TeraSort using HDFS on Ubuntu VMs.

CERTIFICATIONS & AWARDS

- ITF+ (CompTIA) Certified
- Oracle Database SQL Certified Associate
- IEEE Xtreme 18.0: 6th in KSA, 271st Globally
- ACM Programming Jam X: 1st Place, Saudi Arabia

SKILLS AND TOOLS

Programming Languages: Python, C#, Java, JavaScript (JS), TypeScript (TS), SQL.
Frameworks: .NET, Flask, Express.js, Angular, React.
AI & Data: Machine Learning, Web Scraping, OCR, Data Visualization.
Tools & Platforms: Git, Docker, Azure, GCP, OCI.
Languages: Arabic (Native), English (IELTS 6.5 Academic)

REFERENCES

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