AHMED MOHSEN

Computer Engineering Student | AI & Algorithms | Competitive Programming
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LinkedIn · GitHub · Codeforces · Portfolio

PROFESSIONAL SUMMARY

Performance-driven Computer Engineering student at Universite Francaise d'Egypte (UFE) and recipient of the Schneider Electric & UFE Excellence Scholarship. Specializes in algorithmic problem solving, C++ systems programming, and AI prototyping — with active focus on Retrieval-Augmented Generation (RAG) architectures. Active ICPC competitor with 200+ problems solved on Codeforces. Mathematical foundation built through STEM education, the American Math Olympiad, and competitive informatics.

EDUCATION

Universite Francaise d'Egypte (UFE) — Cairo, Egypt *Sep 2025 – Present*
B.Sc. Computer Engineering

- Schneider Electric & UFE Excellence Scholarship — awarded for outstanding academic merit
- Relevant Coursework: Advanced Calculus, Linear Algebra, Discrete Mathematics, Physics, Computer Science I

Obour STEM School — Obour, Egypt *Sep 2022 – Jul 2025*
High School Diploma, STEM Track | GPA: 3.83 / 4.00

- Completed Capstone projects requiring cross-disciplinary scientific research and engineering methodology
- Developed rigorous mathematical and analytical thinking through intensive STEM curriculum

EXPERIENCE

AI Developer — Customer Support AI System (Independent) *Feb 2026 – Present*
Retrieval-Augmented Generation (RAG) Research & Prototyping | Cairo, Egypt

- Designed and investigated RAG architecture to bridge static LLMs with dynamic enterprise data sources
- Built a Python-based prototype pipeline for ticket classification using NLP sentiment analysis
- Explored vector storage and embedding mechanisms for context-aware, mathematically-grounded retrieval
- Applied modular design principles and logical data flow to ensure correctness at every pipeline stage

Embedded Hardware Developer — Sensor & Response System *Nov 2023*
C++ Firmware Development | Tinkercad Simulation

- Developed C++ firmware processing data from 7+ concurrent sensors for real-time diagnostic reporting
- Achieved 80%+ code accuracy rate through rigorous error-handling and layered validation in the data pipeline
- Designed and verified a custom IR command protocol for hardware communication via Tinkercad simulations

COMPETITIVE PROGRAMMING

Active Member — ICPC UFE Community *Nov 2025 – Present*
Codeforces Profile | Algorithmic Problem Solving & Data Structures

- Solved 200+ problems on Codeforces; mastered Level 0 and actively progressing through Level 1
- Optimizing for execution time and memory efficiency using the C++ Standard Template Library (STL)
- Participated in the Beaver Competition (MCIT Egypt) — international computational thinking challenge
- Active training focus: Graph Theory, Dynamic Programming, Number Theory, Recursion, Backtracking

TECHNICAL SKILLS

Programming Languages: C++ (Advanced Logic & STL), Python (Data Structures & Automation)
AI & Machine Learning: RAG Architectures, Transformer Basics, Sentiment Analysis, Vector Retrieval, ML Fundamentals
Core Foundations: Algorithms & Data Structures, Discrete Mathematics, Linear Algebra, Recursion, Signal Processing
Hardware & Embedded: Arduino Programming, C++ Firmware, Sensor Systems, IR Protocols, Microcontrollers
Tools & Platforms: Git & GitHub, VS Code, Google Colab, Tinkercad

CERTIFICATIONS & HONOURS

- Google Machine Learning Badges — Google Developers (Jan 2026)
- Schneider Electric & UFE Excellence Scholarship Attestation (Nov 2025)
- Basics of Artificial Intelligence — Egyptian Academy for Engineering & Advanced Technology, Ministry of Military Production (Jan 2024) | Neural Networks & ML
- Arduino Level 1 Certificate — EGY STEM (Jan 2023) | Programming & Hardware Interfacing
- Arduino & Robotics Diploma — EL-Forsa Academy (Jan 2023) | Electronics & Robotics Applications
- American Math Olympiad (AMO) — Certificate of Participation, Southern Illinois University (Jan 2022)
- Beaver Informatics Competition — Certificate of Participation, Ministry of Communications & IT, Egypt (Nov 2021)

LANGUAGES

Arabic: Native / Bilingual proficiency
English: B2 — Professional Working proficiency
French: A1 — Elementary / Basic Communication