

Abdelrahman Ali Mohamed

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Military status: Exemption

OBJECTIVE

Energetic and passionate Computer Engineering student with a strong foundation in Programming, Calculus, and Physics. Proficient in C++, Python, and MySQL. Proven ability to solve complex problems and work effectively in a team environment. Seeking to leverage technical expertise in software development, database management, and system analysis to contribute to challenging projects. Eager to apply skills in a professional environment while continuing to grow as a dedicated developer.

EDUCATION

October University for Modern Sciences and Arts (MSA) Oct. 2022 – July 2027
Bachelor of Science in Computer Systems Engineering
• CGPA: 3.68/4.0

EXTRACURRICULAR ACTIVITIES

TITANS MSA Club Oct. 2022 – March 2026

Positions Held:

- Marketing Team Member
- Co-Head of Marketing Team
- Organizing & CCA Team Member
- Co-Head of Organizing & CCA Team
- Head of Organizing & CCA Team
- Head of Planning Team

Participation and Experiences:

- Actively participated in the strategic marketing, logistics organizing, and comprehensive planning of major university events for the club.
- Educated and trained incoming team members on foundational principles across the three core categories: marketing, organizing, and planning.
- Supervised and heavily participated in the end-to-end execution of three flagship events: TITANS Expo, TITANS Sports Day, and TITANS Olympics.
- Gained deep, hands-on leadership and operational experience across all three major fields over several academic terms.

PROFESSIONAL EXPERIENCE

Kuwait Financial Center "Markaz" June 2025 – July 2025
Network and Systems Engineering Intern *Kuwait City, Kuwait*

- Learned and performed software testing on company applications to help find and fix bugs.
- Assisted the engineering team with monitoring and troubleshooting network and embedded systems.
- Worked with team members to review different technical designs and solve project problems.
- Completed assigned technical tasks on time while learning to work under professional workplace constraints.

Al-Hadi Glass and Aluminum Industries June 2025 – July 2025
Network and Systems Engineering Intern *Subhan, Kuwait*

- Learned to conduct software testing on corporate systems to help verify program stability.

- Assisted the engineering team with everyday monitoring and setup of network and embedded systems.
- Worked alongside team members to review software applications and explore technical design alternatives.
- Collaborated effectively with multidisciplinary teams to complete technical tasks under workplace constraints.

PROJECTS

Personal Web Portfolio | *HTML/CSS, Flexbox, UI/UX Design*

Aug. 2026

- Developed a custom, multi-page web portfolio from scratch to digitally showcase technical capabilities, creative assets, and professional milestones.
- Architected a responsive, mobile-first layout utilizing advanced CSS Flexbox and media queries to ensure an intuitive user experience across all device screen sizes.
- Managed the end-to-end front-end design flow, implementing precise layout alignments, custom horizontal scrolling image galleries, and cross-device visual debugging.

NLCA Lightweight Cipher Implementation | *Python, Cryptography*

May 2026

- Implemented the New Lightweight Cryptographic Algorithm (NLCA) symmetric block cipher utilizing a 128-bit block size and a 128-bit secret key configuration.
- Programmed a 5-round key generation schedule and mathematical round function combining Feistel architecture with substitution-permutation techniques.
- Developed structural confusion and diffusion layers using bitwise XOR/XNOR logic, circular bit rotations, and a custom 4-bit S-Box layer to protect against data attacks.

Towers of Hanoi AI Applet | *React, TypeScript, Vite, Framer Motion*

May 2026

- Developed an interactive web applet demonstrating procedural artificial intelligence concepts and state-space search parameters to solve the classic game.
- Programmed a core recursive solver algorithm capable of generating optimal move sequences and evaluating step-by-step game configurations.
- Built an animated front-end user interface featuring manual gameplay tracking, step visualization modes, and constraint validation checks.

Online Discussion Forum Database Architecture | *MySQL, Relational Design*

May 2026

- Designed and implemented a relational database schema normalized up to the Third Normal Form (3NF) to manage structured forum threads and posts.
- Built a secure user management layer using Role-Based Access Control (RBAC) with defined permission sets for admins, moderators, and users.
- Programmed database logic using stored procedures for post insertion, automated triggers for audit logging, and transactional rollbacks to ensure data consistency.
- Optimized data retrieval speed by creating targeted database indexes on foreign keys, usernames, and thread identifiers to minimize full table scans.

Digital Audio Equalizer System | *MATLAB, DSP, LTI Systems*

May 2026

- Developed a digital parametric audio equalizer utilizing Infinite Impulse Response (IIR) biquad filters to adjust frequency responses.
- Implemented a structured four-phase signal chain: pre-processing data acquisition, mono down-mixing, time-domain filtering, and output normalization.
- Utilized Fast Fourier Transforms (FFT) to verify frequency spectrum modifications and enforced dynamic range scaling to prevent audio clipping distortion.

Library Management System | *Python, Flask, MySQL, HTML/CSS*

Dec. 2025

- Built a web-based administration application using the Flask framework to automate library operations, item status tracking, and inventory control.
- Created a dual-interface dashboard that routes users to self-service book searches and allows librarians to manage books, monitor active loans, and send text alerts.
- Enforced database integrity constraints and structured transaction logic to synchronize simultaneous updates across books and borrowing tables.

Small Business Network Setup | *Cisco Packet Tracer*

Apr. 2025 – May 2025

- Designed and simulated a complete local network for a small business using Cisco Packet Tracer.
- Configured essential automated network infrastructure services, including automated IP allocation and domain name lookup.
- Set up functional internal and external web services to practice routing traffic between office environments.

Electronics Dice Roller | *C, ATmega32, Proteus, PCB Design*

Apr. 2025 – May 2025

- Programmed an embedded microcontroller system in C to simulate an electronic dice roller machine.
- Tested and verified the hardware behavior by building a functional circuit simulation inside Proteus.
- Designed and implemented a physical circuit board layout to handle real-time hardware interaction.

Student Attendance System | *C++, Qt, Overleaf*

Feb. 2025 – May 2025

- Built a secure, multi-threaded backend in C++ that saves attendance records in real-time to text files.
- Designed a user-friendly graphical interface using Qt to support secure instructor logins and timed login windows.
- Wrote a detailed project report on Overleaf covering the code architecture, technical bugs, and ethical considerations.

PROFESSIONAL SKILLS

- **Engineering & Infrastructure:** Network Monitoring, System Setup, Embedded Systems, Network Architecture, Software Testing, Quality Assurance
- **Programming Languages:** C, C++, Python, SQL, MATLAB, TypeScript, JavaScript, HTML, CSS
- **Tools & Frameworks:** Flask, React, MySQL, Cisco Packet Tracer, Proteus, PCB Design, Git, Overleaf, GitHub Pages, Flexbox

SOFT SKILLS

- **Collaboration:** Working in multidisciplinary teams, leading and motivating individuals
- **Problem-Solving:** Analyzing design alternatives, handling tight constraints, managing workplace pressure
- **Management:** Task prioritization, time management, efficient technical resource handling

LANGUAGES

- **Arabic**
- **English**