

# Ibrahim Mohamed

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## EDUCATION

### Ain Shams University

Cairo, Egypt

*Bachelor of Computer Science*

*June 2026 (Expected)*

- Relevant Courses: Analysis & Design of Algorithms, Data Structures, OOP, Databases, Artificial Intelligence, Technical Writing, Networks.

## EXPERIENCE

### Founding Software Engineer

Oct. 2025 – Present

*Pirates Company · Cairo, Egypt*

- Building and maintaining the core backend systems powering Ahoy's Enterprise Resource Planning platform (inventory, vendors, accounting, and factory operations).
- Developing a separate e-commerce Orders system with its own backend and database, integrated with the ERP through clean service-to-service communication.
- Implementing PostgreSQL schemas, business workflows, and production logic using FastAPI and Docker.
- Deploying services on AWS using EC2, RDS, and S3 to ensure scalability and reliability.

### Software Contributor

Apr. 2025 – Oct. 2025

*Open Source · Remote*

- Collaborated on improving accessibility for Synfig across Linux distributions using Bash scripts.
- Contributed to discussions on maintainability, focusing on unit tests and documentation.
- Actively contributed to open-source projects, ensuring seamless integration and system compatibility.

## PROJECTS

### QuestBoard — Python, Flask, Docker, AWS — [GitHub](#)

Aug. 2025 – Sept. 2025

- Built a full-stack Flask app for weekly coding challenges with live leaderboard and REST API endpoints.
- Implemented user authentication (JWT), submission upload/verification, and live scoring system.
- Dockerized for deployment and integrated with AWS services.

### FOS (Faculty Operating System) — C, Assembly, GNU Toolchain, QEMU — [GitHub](#)

Sept. 2025 – Oct. 2025

- Developed a teaching OS implementing core components such as kernel, scheduler, and memory management.
- Used QEMU for emulation and debugging; documented labs for students to explore OS internals.

### Data Communication Project — C#, TCP Sockets — [GitHub](#)

Feb. 2024 – Mar. 2024

- Built a client-server application with TCP socket messaging and protocol features.
- Implemented connection handling, message framing, and error recovery.

### Speaker Identification — C#, WinForms, MFCC, DTW — [GitHub](#)

Apr. 2024 – May 2024

- Created a desktop app for speaker identification using MFCC feature extraction and DTW.
- Built a UI for enrollment, testing, and real-time recognition.

## TECHNICAL & SOFT SKILLS

**Programming Languages:** Proficient: Python, Go, TypeScript — Familiar: C++, Rust, Java

**Databases:** SQL, PostgreSQL, Redis, MongoDB

**Tools & Technologies:** Git, GitHub, GitHub Actions, Linux (WSL), Bash, Docker, Kafka, AWS, CI/CD, Kubernetes, REST APIs, FastAPI, Flask, Gin (Go), NestJS, Next.js, Axum (Rust - basic)

**Computer Science Concepts:** Design Patterns, Data Structures, Algorithms, Networking, Operating Systems, OOP, Microservices Architecture, Unit testing, Integration testing, System Design, SOLID principles

**Soft Skills:** Communication, Planning, Curiosity, Flexibility, Fast Learning, Teamwork, Reasoning, Taking Initiative

**Languages:** Arabic (Native), English (Intermediate)

## EXTRA-CURRICULAR ACTIVITIES

### acmASCIS Student Activity

Dec. 2023 – Jan. 2025

*Ain Shams University*

*Cairo, Egypt*

- Completed Levels 1 and 2 in problem-solving using C++. Covered Optimization, Complexity Analysis, Number Theory, Data Structures, and Algorithms.