

ISMAIL MUHAMMED ISMAIL

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EDUCATION

Ain Shams University

Bachelor of Computer and Information Science; **CGPA: 3.8 out of 4.0**

Cairo, Egypt

Graduated: 2026

- **Relevant Courses:** Operating Systems, Data Structures, OOP, Database Systems, Algorithms

EXPERIENCE

Skru Game [\[Link\]](#)

Jan. 2025 - Present

Backend Developer (1M+ Downloads)

Remote

A real-time multiplayer card game with over 45k daily active users. Tasked with improving backend architecture, real-time communication, and overall system reliability.

- Optimized database schema, improving data consistency and reducing query execution time.
- Developed comprehensive end-to-end (E2E) tests for backend APIs and complex game flows using NestJS and Jest.
- Designed and shipped game related features into production using NestJS, MongoDB and Redis.
- Refactored large portions of the backend codebase, reducing technical debt and cutting developer onboarding time.
- Managed containerized environment with Docker.
- Integrated LiveKit for real-time voice chat, implementing secure token generation and room management.

Gameball [\[Link\]](#)

Aug. 2024 – Sept. 2024

Full Stack Developer Trainee

Cairo, Egypt

An intensive on-campus training program focused on practical applications of modern full-stack web technologies focused on Angular and .NET.

- Completed an intensive on-campus full-stack training covering frontend and backend frameworks.
- Built a social media application as a final project, applying learned concepts in a practical environment.

GRADUATION PROJECT

AI powered Lecture Translator | NestJS, Event-Driven Architecture, Python

Sponsor: Microsoft

This is an AI-powered system that translates raw Egyptian Arabic lecture recordings into English which supports minorities (foreign students who do not speak Arabic) in our university and provides summaries and interactive generated slides.

- Analyzed state-of-the-art research in Egyptian Arabic ASR and Translation to define project architecture.
- Curated a dataset of 30+ hours of lecture recordings and leveraged AI assistance to transcribe it and manually verified the dataset.
- Fine-tuned OpenAI's Whisper Large-v3, achieving a 45% reduction in Word Error Rate (WER) compared to the baseline model for Egyptian Arabic.
- Integrated AWS S3 for bucket storage and Google's firebase for authentication

PROJECTS

Dawy App | Flask, Flutter, AI Integration [\[3rd Place – Hackathon\]](#)

A full-stack medical application integrating an AI pipeline to automate the processing of prescription data.

- Annotated medical prescriptions to train an AI pipeline for data processing and analysis.
- Integrated the Python-based AI pipeline with the backend, creating a full-stack solution.
- Secured 3rd place out of 50+ teams in a competitive hackathon environment (STP's 2025 Macathon).

FOS (Mini OS) | C, Operating Systems [\[Link\]](#)

A toy operating system built during our OS course to explore low-level system design and kernel operations, placed 10th out of 100+ teams.

- Implemented a memory manager handling kernel and user-level memory allocation/deallocation.
- Developed semaphores and locks to ensure robust process synchronization.
- Gained deep hands-on experience with concurrency, scheduling, and low-level OS design.

ACHIEVEMENTS

Problem Solving

- Solved **300+ problems** across LeetCode and Codeforces, focusing on algorithms and data structures.

EXTRACURRICULAR

Microsoft Student Partner | *Organizer*

- Organized an Android Security Summer Training, facilitating technical sessions for students.

CyberUs | *Trainee*

- Completed “Web Secure Summer Training,” building an e-commerce app with OWASP mitigations.

ACM ASCIS Student Chapter | *Member*

- Participated in algorithmic training sessions and coding contests to enhance problem-solving skills.

SKILLS

Programming Languages: TypeScript, JavaScript, C++ , C, Python, SQL, HTML/CSS

Frameworks: NestJS, Express.js, Flask

Agents: Github Copilot, Antigravity

Databases & Tools: MongoDB, PostgreSQL, Redis, RabbitMQ, Docker, Linux, Bash, Git, Jest

Concepts: Data Structures, Algorithms, OOP, REST APIs, Microservices, SOLID, Design Patterns

Languages: Arabic (Native), English (B2), German (A2)