Ibrahim Mohamed

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SUMMARY

A well-rounded Software Engineer combining academic studies, hands-on technical knowledge, and interpersonal skills. Pursuing a Bachelor's degree in Computer Science. Passionate about learning new technologies and exploring them in depth. Curious and adaptable, with a strong desire to understand concepts thoroughly and apply them effectively. A fast learner with proven ability to communicate technical concepts clearly and collaborate effectively with teams.

EDUCATION

Bachelor of Computer Science, Ain Shams University. Oct 2022 - June 2026 (Expected)

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

SKILLS

Technical Languages	Python, C++, C, Java, Bash, SQL, JavaScript, Rust (familiar), Go/Golang (familiar)
Technical Skills	OOP, Data Structures, Algorithms, Networking, Databases, Operating systems, Git, GitHub, GitHub Actions, Linux (WSL), Redis, Postgres, AWS, Docker
Soft Skills	Communication, Planning, Presenting, Public Speaking, Open-mindedness, Curiosity, Flexibility, Fast Learning, Documentation, Troubleshooting, Teamwork, Leadership
Languages	Arabic (Native), English (Good)

EXPERIENCE

Software Contributor July 2024 - Present (Remote)

- Collaborated on improving accessibility for Synfig across Linux distributions using bash scripts.
- Contributed to discussions around ensuring code quality and maintainability, with a focus on unit tests and code documentation.
- Actively contributed to open-source projects, ensuring seamless integration and system compatibility.

PROJECTS

QuestBoard. Full-stack Flask app for weekly coding challenges with live leaderboard. GitHub Repo

- Built end-to-end challenge flow: user auth (JWT), submission upload/verification, scoring, and a live leaderboard served both server-rendered pages (Jinja2), REST endpoints for integrations and fully Dockerized and prepared for AWS deployment.

FOS (Faculty Operating System). Teaching operating system implemented mainly in C (with some Assembly) to explore core OS concepts. GitHub Repo

- Implemented kernel components in C/ASM, worked with the GNU toolchain and emulators/debuggers (QEMU) to run and test the OS, and wrote/documented lab exercises or examples for learning OS internals.

Data-Communication-Project. C# client–server application implementing TCP socket messaging and basic protocol features. GitHub Repo

- Built both client and server components to demonstrate reliable message exchange over TCP; implemented core protocol features (connection handling, message framing/commands, and simple messaging semantics) and exercised networking fundamentals such as serialization, error handling, and testing.

Speaker-Identification. C# WinForms speaker-identification application using MFCC feature extraction and Dynamic Time Warping for enrollment and recognition. GitHub Repo

- Implemented an end-to-end speaker recognition pipeline: audio capture → preprocessing (framing/windowing) → MFCC feature extraction → enrollment database → DTW-based matching for verification; built a WinForms UI for enrollment, testing, and live recognition.

Asteroids. Python game project implementing the classic "Asteroids" arcade experience. GitHub Repo

- Built a playable arcade-style game demonstrating core game-dev concepts: game loop, input handling, object spawning, collision handling, scoring, and asset management; includes runnable code and project assets.

EXTRA-CURRICULAR ACTIVITIES

- Trainee at acmASCIS student activity in which I completed levels 1 and 2 in problem-solving using C++, Topics (Optimization, Complexity Analysis, Number theory, Data structures, and Algorithms).
