



## Abdelrahman Amer

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## EDUCATION

Faculty of Commerce - Cairo University

AUG 2018 – JUN 2023

ALX Africa - Remote  
Software Engineering Certificate  
FEB 2023 – JUN 2025

## Professional & Core Competencies

- Intense Commitment & Discipline
- Rapid Self-Learning
- Problem Decomposition
- Peer Collaboration & Feedback
- Agile Mindset
- Technical Communication

## TECHNICAL SKILLS

### Back-End & Systems

Python, C, Node.js, Linux, Bash/Shell, Memory Management

### Front-End & Web

JavaScript (ES6+), TypeScript, React (Hooks, Redux), HTML, CSS

### Databases

PostgreSQL/MySQL, Redis, SQL, Data Modeling

### Infrastructure & DevOps

Git, GitHub, NGINX, Load Balancers, SSL/TLS, SSH

### Tools & Methodologies

Docker, Vim, Makefiles, Postman, OOP, Data Structures & Algorithms

### Languages

English - Arabic

## PROFILE

A highly disciplined and committed Software Engineer with a robust foundation in full-stack development and system-level programming, complemented by a university background in Commerce. Proven ability in rapid self-learning and problem decomposition, evidenced by successful completion of rigorous projects from the ALX Africa Software Engineering Certificate. Expertise spans Python, Node.js, C, and modern web technologies, including developing RESTful APIs (Express, Flask), complex backend systems (MySQL, Redis), and system-level tools (UNIX shell). Seeks to leverage strong technical competence and an Agile mindset in a challenging development role.

## EXPERIENCE

### AirBnB Clone - Backend & Console

Engineered a complete full-stack foundation for an AirBnB-style platform using a custom Python command-line interface. The console dynamically handles all application classes—including User, State, City, Place, Review, and Amenity—delivering full CRUD (Create, Read, Update, Delete) functionality. Designed to emulate a Unix shell, it supports both interactive and scriptable modes, ensuring flexible and robust data management. The entire system was validated through an extensive suite of unit tests, covering all models and console commands.

**Tech Stack:** Python, Custom ORM, JSON Data Persistence, Unittest

### Backend API for Crypto Portfolio

Built a Node.js/Express server with MySQL database to manage cryptocurrency investments. Implemented CRUD operations, automated average price calculation for duplicate entries, and ensured data integrity through input validation and error handling.

**Tech Stack:** Node.js, Express, MySQL, REST API.

### Full-Stack JavaScript Development

Built multiple backend systems including REST APIs with Express.js, Redis caching, MySQL integration, and async data processing. Implemented job queues, rate limiting, authentication, and comprehensive error handling.

**Tech Stack:** Node.js, Express, Redis, MySQL, MongoDB, Jest.

### Flask To-Do Web Application

Developed a full-stack web application using Python/Flask backend with SQLite database. Implemented RESTful routing and CRUD operations allowing users to create and manage tasks through an interactive web interface. Features include form handling, database management, and dynamic HTML templating.

**Tech Stack:** Python, Flask, SQLite, HTML/CSS, REST API.

### Simple Shell - C Project

Developed a custom UNIX command-line interpreter implementing core shell functionalities. Handles command execution, built-ins (exit, env, cd), and path resolution. Utilizes system calls (fork, execve, wait) for process management with comprehensive error handling. Supports both interactive and non-interactive modes.

**Tech Stack:** C Programming, System Calls, Process Management, UNIX/Linux Environment.