

# Abdelrahman Ahmed Hassan Atia

Egypt, Giza, 6 October

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Portfolio: abdelrahman730.github.io | Military Status: Completed

## Professional Summary

Backend Engineer with expertise in designing scalable server-side architectures, RESTful APIs, and high-performance database systems. Proficient in containerization, CI/CD automation, and cloud orchestration. Strong foundation in algorithmic design, system optimization, and building production-ready backend infrastructure.

## Technical Skills

**Backend Development:** Node.js, PHP, Python, RESTful API Design, Microservices Architecture, Server-Side Logic  
**DevOps & Infrastructure:** Docker, Kubernetes, Jenkins, CI/CD Pipelines, Linux, Bash Scripting, Git  
**Databases:** MySQL, Database Design, Query Optimization, Schema Architecture  
**Programming Languages:** C++, C, Python, JavaScript (ES6+)  
**Additional:** TensorFlow Lite, Computer Vision, Algorithm Design, System Performance Optimization

## Professional Experience

**Teaching Assistant, Computer Science Department** Oct 2025 – Present  
German University in Cairo (GUC), Cairo

- Mentor 200+ students in Advanced Programming, Data Structures, and Software Engineering with focus on backend system design and algorithmic problem-solving.
- Conduct technical lab sessions covering server-side development, API design, and database optimization.

**Junior Teaching Assistant, Computer Science Department** Oct 2020 – Feb 2021  
Nile University, Giza

- Supported core programming courses and guided students through backend-focused software development projects.

## Key Backend Projects

**DevOps Web Deployment & Pipeline Orchestration** Nov 2025

- Architected containerized backend infrastructure using Docker with multi-stage builds for optimized deployments.
- Built automated CI/CD pipeline with Jenkins for continuous integration, testing, and production deployment.
- Orchestrated microservices architecture using Kubernetes for horizontal scaling and high availability.

**Restaurant Management System Backend** June 2022

- Developed RESTful API backend using Node.js with Express framework for order and inventory management.
- Designed normalized MySQL database schema with complex relationships and implemented query optimization.
- Implemented role-based access control (RBAC) middleware and JWT authentication for secure API endpoints.
- Built React.js frontend consuming the backend API with real-time dashboard analytics.

**University Management System Backend** Jan 2022

- Built full-featured academic portal backend with PHP, managing student registration, grading, and attendance systems.
- Designed relational database architecture with MySQL for handling complex academic data relationships.
- Implemented session-based authentication and role-based authorization for students, faculty, and administrators.

**ASSIST ME: Computer Vision Backend System** June 2023

- Engineered backend processing pipeline for real-time OCR and object detection using YOLOv8 and TensorFlow Lite.
- Optimized model inference performance for mobile deployment, achieving 95% accuracy in text recognition.
- Integrated CNN-based facial recognition system with distance estimation algorithms.

**Interactive Parse Tree Visualizer** June 2023

- Developed high-performance C++ backend for real-time code tokenization and abstract syntax tree generation.
- Implemented efficient parsing algorithms with Vulkan-based rendering engine for low-latency visualization.

**Regex-to-Finite-Automaton Engine** June 2022

- Built C++ logic engine to convert regular expressions into DFA/NFA with algorithmic state optimization.

## Education

**Bachelor of Information Technology and Computer Science** 2019 – 2023  
Nile University, Giza | Concentration: Media Informatics | GPA: 3.69/4.0

## Certifications

**KodeKloud:** Docker for Beginners, Kubernetes for Beginners, Jenkins for Beginners  
**IBM:** Data Science Specialization, Data Analysis Specialization

## Languages

Arabic: Native | English: Professional Working Proficiency