

Ahmed Mahmoud | Software Engineer

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Education

Bachelor of Systems and Biomedical Engineering

2021 – 2026

Cairo University - Faculty of Engineering • Cumulative GPA: Very Good

Experience & Participations

- **Digital Egypt Pioneers Initiative (DEPI) DevOps Track - Ministry of Communications and Information Technology (MCIT)** (2025)
- **Front-End Web Development Intern - Elevvo** (Sep 2025)
- **Computer Vision Engineering Intern - MedVerse** (Jul – Oct 2025)

Projects

JSONServ | GitHub

2026

Lightweight REST API Server

Go, JSON, REST API

- Lightweight REST API server that automatically generates CRUD endpoints from JSON files.
- Implemented support for filtering, sorting, pagination, and persistent data storage, image uploading, enabling rapid API prototyping and frontend development.

MediCover - Health Insurance Platform | GitHub

2026

Microservices Health Insurance App

Node.js, Express, PostgreSQL, Redis, Docker

- Distributed health insurance system with five microservices services (Auth, Policy, Claims, Billing, API Gateway).
- Event-driven communication using Redis Pub/Sub, JWT-based authentication across services, and containerized the application with Docker and Docker Compose.

NeuroSight - Neurology Clinic Management System | GitHub

2026

Medical Management Platform with AI

React, Next.js, FastAPI, TensorFlow

- Neurology clinic management system with role-based access for clinicians, administrators, and patients, including patient management, appointments, and billing.
- DICOM viewer with Multi-Planar Reconstruction (MPR) and integrated a AI-based CDSS for neurological anomaly detection.

Learnova | GitHub

Jul 2025

Educational Platform

React.js, Node.js, MongoDB

- Scalable full-stack learning platform with LMS features including course management, quizzes, and user progress tracking.
- Built a responsive and engaging user interface using modern web technologies to provide a seamless learning experience.

BidTreasure - Real-Time Auction Platform | GitHub

2025

Auction Dashboard

React.js, Tailwind CSS

- Client-side online auction platform using React and Tailwind CSS with an intuitive and responsive interface.
- Implemented real-time bidding functionality using Socket.IO to provide instant bid updates for all participants.

Graduation Project

Pseudo-Healthy Vertebral Image Synthesis for Interpretable Compression Fracture Grading

2026

Medical Image Synthesis

PyTorch, GAN, SVM

Developed GAN model, a coarse-to-fine synthesis framework to generate pseudo-healthy vertebral images for precise osteoporotic compression fracture grading. Introduced Relative Height Loss of Vertebrae (RHLV) metric for quantification and achieved state-of-the-art classification on Verse2019 dataset.

Skills

Backend: Typescript, Node.js, Express.js, MongoDB, PostgreSQL, Socket.io, Jest

DevOps: AWS, Terraform, Docker, Kubernetes, Jenkins, Ansible, Nginx, Git, GitHub

Frontend: React.js, Redux, Tailwind CSS

General Concepts: Algorithms, Data Structures, OOP, Software Testing, Design Patterns, CV, ML, DL, parallel computing

Languages: English: CEFR B2 – Upper Intermediate