

# Ahmed Emara

Software Engineer

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## Experience

**Software Engineer Intern, ITWorx** Jul 2023 – Aug 2023

- Developed an AI-powered application using Kotlin and Android Studio.
- Integrated OpenAI API for automated story generation and AI-based image synthesis, producing 100+ comic panels.
- Implemented RESTful API integration and core CRUD features following Clean Architecture principles.
- Designed and implemented comprehensive error handling and logging mechanisms for API calls and user inputs, improving application reliability, monitoring, and debugging efficiency.

## Education

**Intensive Code Camp - Full-Stack Web & Generative AI Development using Python** Nov 2025 – March 2026

ITI - Information Technology Institute

**Bachelor of Computer Science** Oct 2020 – July 2024

AAST - Arab Academy for Science and Technology - GPA: 3.3

## Projects

### Service-Hub | GitHub

**Technologies:** React, Python, Django REST Framework, PostgreSQL, JWT, Docker, AWS EC2

- Developed modular, reusable React components with scalable UI architecture and efficient state management.
- Designed and implemented RESTful APIs using Django REST Framework to support bid lifecycle management and complex workflows.
- Engineered optimized PostgreSQL schemas with efficient relational modeling, indexing, and high-performance querying (search, filtering, pagination).
- Built secure, scalable backend architecture with clear separation of concerns, incorporating JWT-based authentication and role-based access control (RBAC).
- Containerized and deployed the application using Docker on AWS EC2, ensuring production readiness, scalability, and consistent environments.

### Spendlify | GitHub

**Technologies:** Python, Flask, PostgreSQL, Google Gemini AI, JWT, JavaScript, Chart.js

- Designed and implemented RESTful APIs using Flask for financial workflows (income, expenses, savings goals, bill tracking) with secure JWT-based authentication.
- Engineered optimized PostgreSQL schemas for transactional and analytical workloads, supporting multi-currency data and efficient querying.
- Integrated AI-driven financial insights using Google Gemini AI for intelligent spending analysis and recommendation generation.
- Developed interactive analytics dashboards using JavaScript and Chart.js, with real-time visualization and CSV import/export pipelines for scalable data handling.

## Skills

**Programming Languages:** Python, PHP, JavaScript, TypeScript, Java, C#

**Development Frameworks:** React.js, Redux, Angular, Django, Django Rest, Flask, Fast API, Express.js, Node.js, ASP.Net, ASP.Net Core, Entity Framework Core, NUnit, pytest, Jest, Mocha

**Database:** MySQL, PostgreSQL, MongoDB, SQL Alchemy

**Other:** Agile Methodology, Jira, Git, Docker, AWS (EC2, S3, IAM, RDS, Lambda), Linux, CI/CD, Jenkins, NGINX, Bash, Gunicorn, Microservices, MVC, REST Design, Authentication (JWT), RBAC, Clean Architecture, Design Patterns, Prompt Engineering, Generative AI, RAG, LangChain

## Courses

**Cloud Architecture, AWS – 2024**

**Linux Fundamentals, MaharaTech – 2025**

## Awards & Activities

**Best Capstone Project Performance Award, Computer Science Society, AAST - Jul 2024**

**Ranked Top Student for Two Consecutive Semesters, Arab Academy for Science, Technology - 2022–2023**

**Participation & Certificate of Appreciation, ECPC (Egyptian Collegiate Programming Contest), AAST — Aug 2022**

## Languages

English (Advanced – C1) Arabic (Native)