

# Youssef Farag

Full-Stack Software Engineer — Front-End & Back-End Developer

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## SUMMARY

**Full-Stack Software Engineer** with expertise in designing and developing **client-side and server-side architecture** for scalable applications. Proficient in **Java (J2EE, Spring Boot, Spring Microservices)**, as well as **JavaScript, TypeScript, React, Node.js, and Python**. Hands-on experience building and integrating **RESTful APIs**, implementing **design patterns**, and applying **OOP principles** to deliver maintainable, high-performance systems. Skilled in **Docker, Kubernetes, CI/CD pipelines**, and **Agile methodologies**. Strong background in **database design (SQL & NoSQL)**, **API integrations**, and **data visualization**. Proven ability to translate **business requirements into technical solutions** and deliver **production-ready, enterprise-grade applications**.

## EDUCATION

### Alexandria University

Bachelor's Degree in **Computer Science** (Specialization: Computing and Data Science)

Alexandria, Egypt

Sep 2021 – Jun 2025

– **CGPA: 3.80 / 4.00** – Equivalent Grade: **Excellent with Honours Degree**.

## EXPERIENCE

### Software Engineer Intern

Aug 2025 – Oct 2025

CyberGuardX Integrated Solutions LLC

Alexandria, Egypt

- Designed and developed **client-side and server-side architecture** for a tourism booking platform using **React, TypeScript, Node.js, and Express**.
- Built scalable **REST APIs and microservices** with **MongoDB**, achieving response times under **300ms**.
- Developed **front-end components** using **React, JavaScript, HTML, CSS**, implementing responsive design and optimistic UI updates.
- Implemented **multi-step transactional validation** and integrated **third-party payment APIs**.
- Deployed applications using **Docker containers** on cloud platforms, achieving **99.9% uptime** through monitoring and debugging.
- Collaborated with stakeholders using **Agile/Scrum methodologies** to gather requirements and deliver iterative solutions.

### Full-Stack Developer

Jan 2025 – Apr 2025

Nedialo Outsourcing and Offshoring Consulting

Cairo, Egypt

- Developed and maintained **front-end and back-end components** for a real estate outsourcing CRM platform using **Django, JavaScript, HTML, CSS, and MySQL**.
- Optimized **SQL queries** and database architecture, improving application load speeds by **35%**.
- Built analytics dashboards with **data visualization** for real-time metrics and business insights for 100+ active users.
- Managed cloud deployments, implemented **CI/CD practices**, and maintained **zero downtime** through proactive monitoring.
- Integrated **third-party APIs** like **Discord Server API**, and webhooks for real-time error logging and system health monitoring.
- Diagnosed and resolved **critical system bugs**, including fixing **cross-platform audio playback issues** where voice notes sent from IOS device , ensuring full compatibility and stability.

### Web Development Trainee

Summer 2024

Information Technology Institute (ITI)

Alexandria, Egypt

- Completed hands-on training in **full-stack web development** using **HTML, CSS, JavaScript, PHP, and MySQL**.
- Built a complete **full-stack web application** deployed on an **Apache server**, integrating both front-end and back-end components.
- Gained practical experience in **database design, server-side scripting, and client-server communication**.
- Collaborated in a team environment to design, implement, and present a functional web solution following best development practices.

## PROJECTS

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### AI-Powered Q&A Platform (RAG System)

*FastAPI, Python, LangChain, OpenAI, React, Docker*

- Designed and developed **full-stack application** with **React front-end** and **Python/FastAPI back-end** for document querying.
- Built **RESTful services** for embedding, retrieval, and document processing.
- Integrated **third-party APIs (OpenAI)** with vector database for contextual AI-powered responses.
- Containerized services with **Docker** and implemented deployment pipelines for cloud environments.
- Translated requirements into technical architecture for semantic search functionality.

### Collaborative Task Manager Web App

*Node.js, TypeScript, React, PostgreSQL, Prisma, JWT, Docker*

- Developed **full-stack application** using **TypeScript, React, Node.js, and Express** with **PostgreSQL** database.
- Designed and implemented secure **RESTful APIs** with authentication, authorization, and comprehensive error handling.
- Built **responsive front-end components** with **Redux** state management and optimistic UI updates.
- Containerized application using **Docker Compose** and implemented **CI/CD practices**.
- Conducted testing and debugging to ensure clean, functional, and maintainable code.

### Travel Logging and Mapping Platform

*React, JavaScript, Node.js, Express, MongoDB*

- Developed **full-stack geospatial application** with **React front-end** and **Node.js/Express back-end**.
- Built **data visualization** features using interactive maps and **JavaScript** libraries for user engagement.
- Implemented **RESTful APIs** with **MongoDB (NoSQL)** for CRUD operations.
- Integrated the **Leaflet Maps API** to display user locations, travel routes, and visited destinations interactively on the map.

### Sales Analytics Dashboard

*Next.js, TypeScript, React, Tailwind CSS, Redux Toolkit*

- Built responsive **front-end application** using **React, TypeScript, HTML, CSS (Tailwind)**, and **Next.js framework**.
- Implemented **data visualization** with interactive charts, filterable tables, and pagination.
- Developed **reusable components** and optimized performance using memoization and lazy loading techniques.
- Integrated authentication and state management using **Redux Toolkit** for scalable architecture.

## TECHNICAL SKILLS

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**Front-End Technologies:** HTML, CSS, JavaScript, TypeScript, React, Next.js, Redux, Tailwind CSS, Bootstrap, Responsive Design

**Back-End Technologies:** Node.js, Express, GraphQL, REST APIs, FastAPI, Django, Python, Java, C#, Rust

**Databases:** SQL (MySQL, PostgreSQL), NoSQL (MongoDB)

**Cloud & DevOps:** Google Cloud Platform (GCP), Docker, Kubernetes, CI/CD, GitHub, GitHub Actions, AWS, Nginx

**Architecture & Design:** Client-Side & Server-Side Architecture, Microservices, Full-Stack Development, API Integration, Clean Architecture, OAuth2, JWT Authentication

**Testing & Debugging:** Jest, Supertest, Pytest, Unit Testing, Integration Testing, Test-Driven Development (TDD), Code Debugging

**Data Visualization:** Recharts, D3.js, Interactive Dashboards, Business Intelligence

**Development Tools:** Git, GitHub, Postman, VS Code, Figma

**Methodologies & Soft Skills:** Agile, Scrum, Problem-Solving, Analytical Thinking, Stakeholder Communication, Team Collaboration, Requirement Gathering, Adaptability