

# Ahmed Elarosi

Full-Stack Software Developer (AI Integration | Automation)

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Rosenheim - Germany

Full-stack software developer with 5+ years of hands-on software development experience and 10+ years of prior business and finance experience. Specialized in building scalable web applications, RESTful APIs, and automation systems using Python, JavaScript/TypeScript, React, and AWS. Proven track record of reducing manual workloads, improving system reliability, and delivering measurable business impact through clean architecture, DevOps best practices, and AI-assisted automation.

## Core Technical Skills

**Programming Languages:** Python • JavaScript • TypeScript • Java • SQL • R • HTML/CSS • Bash

**Frontend:** React.js • Streamlit • HTML5/CSS3 • Web Components • Responsive Design

**Backend:** Flask • Django • FastAPI • Node.js • RESTful APIs • Microservices

**AI & Data:** OpenAI API • ChatGPT Integration • LangChain • Pandas • NumPy • Tableau • Data Analytics

**DevOps & Cloud:** AWS (EC2, S3, API Gateway, Lambda) • Docker • Kubernetes • Jenkins • CI/CD Pipelines • GitHub Actions

**Databases:** MongoDB • PostgreSQL • MySQL • Redis

**Tools & Practices:** Git/GitHub • Linux • Postman • VS Code • Jupyter • Agile/Scrum • TDD • Pytest

## Technical Experience

### Independent Software Developer & Data Developer, Rosenheim - Germany

May 2024 - Present

- Deliver custom AI-enhanced web applications and APIs for clients across industries, specializing in automation, data integration, and cloud deployment
- Automated data processing and document workflows using Python and AI-powered parsing, reducing manual processing time by up to 60%.
- Architected and deployed React + Flask/Django applications on AWS, including EC2, S3, and API Gateway, with automated CI/CD pipelines.
- Integrated LLM-powered features (ChatGPT API, Hugging Face models) to enable intelligent search, content generation, and data analysis.
- Implemented containerized deployments using Docker and Kubernetes, improving scalability and deployment consistency.
- Established type-safe front-end and back-end communication using TypeScript and schema-based API validation, reducing runtime errors.
- Improved API performance and system stability by identifying and resolving bottlenecks through profiling, logging, and code optimization.
- Ensured data quality and consistency through validation, error handling, and structured logging.
- Reviewed and improved code quality through regular peer reviews and refactoring.

### Software Developer at Stickx, Rosenheim - Germany

October 2022 - April 2024

- Architected and implemented internal RESTful web applications using Python and Domain-Driven Design (DDD), translating business requirements into scalable technical solutions.
- Developed Python-based automation libraries for parsing supplier emails and PDF invoices, eliminating manual data entry and saving 50+ hours per month.
- Engineered integration pipelines connecting external APIs and FTP systems, enabling near real-time data synchronization across services.
- Enforced Test-Driven Development (TDD) practices using pytest and unittest, achieving 90%+ test coverage and improving system reliability.
- Designed and optimized database schemas (PostgreSQL, MongoDB) to support efficient querying, reporting, and long-term scalability.
- Authored technical documentation and onboarding guides, reducing onboarding time for new developers and users.
- Worked in an Agile/Scrum environment, actively participating in sprint planning, reviews, and production deployments.

## **Independent Software Developer, Berlin - Germany**

January 2022 - September 2022

- Collaborated with startups and small businesses to design and deliver web-based applications using the MERN stack (MongoDB, Express, React, Node.js).
- Developed user-focused front-end components and backend services, improving usability and overall application performance.

## **Arabic Outreach Program Manager at Wikimedia Deutschland e. V., Berlin - Germany**

February 2019 - January 2020

- Managed cross-cultural, multilingual outreach program coordinating with Arabic-speaking communities across multiple countries and Wikimedia affiliates.
- Conducted needs assessment audits to identify documentation gaps and prioritize resource development for partnership, education, and awareness initiatives.
- Led a volunteer-driven translation project, producing localized materials aligned with WMF initiatives.

## **Previous Business & Finance Experience**

### **Co-founder & Operations Manager at Quick Lab, Cairo - Egypt**

August 2016 - October 2018

### **Chief Accountant at Shorakaa For Real Estate, Cairo - Egypt**

February 2011 - July 2016

### **Senior Accountant at Diving Ocean New Project, Marsa Alam - Egypt**

September 2008 - January 2011

## **Key Projects**

### **AI-Powered Document Parsing System**

- Built a Python-based application leveraging the OpenAI API and PDF parsing libraries to extract structured data from invoices and documents.
- Saved 50+ hours per month by automating manual document processing workflows.
- Tech Stack: Python, OpenAI API, Flask, MongoDB.

### **Scalable REST API with Microservices**

- Designed and implemented a domain-driven REST API architecture with Docker containerization and Kubernetes orchestration.
- Enabled scalable deployments and service isolation in a cloud environment.
- Tech Stack: Python, Flask, Docker, Kubernetes, PostgreSQL, AWS.

### **Data Analytics Dashboard**

- Created an interactive Streamlit dashboard for real-time business metrics with automated data refresh.
- Improved decision-making through centralized, near real-time reporting.
- Tech Stack: Python, Streamlit, PostgreSQL, Pandas.

## **Education**

### **Full Stack Web & Software Development at Digital Career Institute (DCI), Berlin - Germany**

November 2020 - December 2021

### **B.A. Accounting Science at Ain Shams University, Cairo - Egypt**

September 2010

## **Certificates**

### **Google Data Analytics Professional Certificate from Coursera**

October 2025

### **AWS DevOps Best Practices for Beginners | AWS**

October 2024

## **Languages**

**Arabic** - Native

**English** - Fluent

**German** - Proficient

**Italian** - Basic