

Mahmoud Abou-Zaeid

FULL-STACK SOFTWARE ENGINEER — BACKEND DEVELOPER

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SUMMARY

Full-Stack Software Engineer with 2+ years of experience building secure, scalable REST APIs and web applications using .NET, Oracle APEX, Python/Flask, and PHP. Expert in JWT authentication, RBAC, database optimization, and workflow automation for insurance and inspection platforms. Achieved 99% issue-resolution rate and 30% reduction in processing times through system design and adherence to SOLID principles.

WORK EXPERIENCE

Software Engineer

Aug 2025 - Aug 2026

- Architected backend APIs with C# and ASP.NET Core, applying OOP/SOLID for maintainable code.
- Designed normalized SQL Server schemas and ERD models, improving query performance by 25%.
- Secured APIs with JWT and RBAC; built layered BIL/DAL architecture for third-party integration.
- Provided IT support: resolved 30+ tickets/month and maintained 99% network uptime.
- Implemented CI/CD with GitHub Actions, Docker, and AWS, reducing deployment time by 40%.
- Wrote unit tests with xUnit (TDD) and integrated logging/monitoring with Serilog, Prometheus, and Grafana.
- Conducted code reviews and mentored junior developers, boosting team velocity by 15%.

Oracle APEX Developer (Part-time)

Aug 2023 - Aug 2025

- Architected vehicle inspection platform for insurance claims, integrating surveyor assignment and market valuation.
- Engineered 20+ SQL/PL/SQL functions, reducing processing time 30%, boosting satisfaction 25%, with 99% issue-resolution.
- Built approval workflows with Zoho integration and automated reports, achieving 100% RBAC compliance.

PROJECTS

EuroCar360 - Vehicle Verification REST API

A production-grade REST API with layered architecture (BIL/DAL). Implements JWT authentication, role-based access control, and global exception handling across modular controllers. Engineered a high-throughput file upload pipeline (images/documents) and a unified status/review workflow with accept/reject logic. Built using C#, ASP.NET Core (.NET 8), EF Core, and SQL Server; optimized for response times and security. Deployed using Docker containers on AWS.

Euro Loss Adjusters - Insurance Loss Assessment Platform

Comprehensive system for pre-repair, post-repair, supplementary, and salvage vehicle inspections. Features damage assessment, market value estimation, and surveyor assignment. Integrated Zoho for secure image storage and automated approval/rejection workflows. Built 20+ SQL/PL/SQL functions to reduce processing time by 30% and boost user satisfaction by 25%. Developed on Oracle APEX with Oracle Database.

Euro Inspection 360 - Vehicle Inspection Management

Full-lifecycle inspection platform for banks and inspection companies. Manages pricing approvals, inspector assignments, bank-user roles, and generates detailed reports. Implements workflow automation for inspection requests, approvals, and final sign-off. Built with Python, Flask, MySQL, and front-end technologies (HTML, CSS, JS) to deliver a responsive, business-critical tool. Hosted on AWS Elastic Beanstalk with RDS.

Euro Card Generator System

A membership card generator that supports reusable templates, batch generation from Excel files, live preview, and export to PNG/PDF. Includes full Arabic RTL support for right-to-left text rendering. Built with Python, Flask, SQLAlchemy, SQLite, and Pillow for image processing; optimised for high-volume batch printing. Added dynamic field mapping and custom styling options for each card design.

The Pink Club Dashboard

Membership management dashboard for user, package, and subscription administration. Provides REST APIs for mobile app integration, enabling seamless user management and subscription tracking. Developed with PHP, MySQL, HTML, CSS, JS; features role-based access for admins and support staff. Includes analytics dashboards for revenue tracking, renewal forecasts, and user engagement metrics.

EDUCATION

Bachelor’s in Information and Communication Technology

New Cairo Technological University, Cairo, Egypt

Sep 2023 – May 2027

CERTIFICATIONS

Oracle (2023)	APEX Cloud Developer Professional (1Z0-770, 1Z0-771), OCI Foundations Associate (1Z0-1085-23), Database Foundations, Java Foundations & Fundamentals
Other Certifications (2022–2024)	Foundational C# - FreeCodeCamp & Microsoft (2022), EDA for Machine Learning - IBM (2023), Introduction to Cybersecurity - Cisco (2023), ICDL Base - Edraak (2024)

TECHNICAL SKILLS

Technical Languages	C#, SQL, PL/SQL, Python, PHP, Java, JavaScript, C
Backend Development	ASP.NET Core (.NET 8), Flask, Oracle APEX, OOP, SOLID Principles
Databases	SQL Server, Oracle Database, MySQL, SQLite, DB Design & Optimization, ERD Modeling
Frameworks & ORMs	Entity Framework Core, SQLAlchemy
APIs & Security	REST API Design, JWT, RBAC, Authorization, Zoho & 3rd-Party Integration
Architecture	Software Architecture, Layered (BIL/DAL), System Design, Workflow Automation, Microservices
Cloud & DevOps	Docker, Kubernetes, CI/CD (GitHub Actions), AWS (EC2, RDS, Elastic Beanstalk)
Testing & Monitoring	Unit Testing (xUnit, TDD), Integration Testing, Serilog, Prometheus, Grafana, ELK
Tools	Git, Postman, Jasper Reports, face-api.js

CORE COMPETENCIES

Technical	Backend Development, REST APIs, Database Design, System Design, Software Architecture, Authentication & RBAC, Workflow Automation
Professional	Communication, Leadership & Mentoring, Problem Solving, Cross-functional Collaboration, Adaptability, Agile & Scrum, Code Reviews

LANGUAGE PROFICIENCY

Arabic	Native
English	Professional (B1)