

# Mohamed Fawzi Zaki

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## DevOps Engineer | Cloud Infrastructure Specialist

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## Professional Summary

DevOps Engineer with experience in **infrastructure automation**, **cloud-native solutions**, and **CI/CD pipeline implementation**. Proven expertise in container orchestration (**Kubernetes**), infrastructure as code (**Terraform**, **Ansible**), and cloud platforms (**AWS**). Strong background in building scalable systems with focus on observability, security, and deployment automation. Combines backend development expertise with DevOps skillsets to deliver robust, secure, and efficient production systems, optimizing the full application lifecycle from development to deployment. Passionate about clean architecture (SOLID, OOP), modern PHP standards (PSR), and automation-driven operations.

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## Technical Skills

### DevOps & Cloud Technologies

- **Virtualization:** VirtualBox, Vagrant.
- **Containers & Orchestration:** Docker, Kubernetes (EKS, Minikube), Helm.
- **Infrastructure as Code:** Terraform, Vagrant.
- **Configuration Management:** Ansible.
- **Version Control:** Git, Github.
- **CI/CD:** GitHub Actions, Jenkins, GitHub Webhooks.
- **Monitoring & Observability:** Prometheus/Grafana, CloudWatch.
- **Cloud (AWS):** EC2, S3, RDS, EKS, IAM, CloudWatch.
- **Networking:** Service meshes, load balancing (NGINX), distributed systems.
- **Scripting:** Bash
- **Security:** IAM, Secrets Management, SSL, Firewalls, Input validation, rate limiting, API token management, JWT, CSRF/XSS protection

### Backend & Systems Engineering

- **Languages:** PHP/Laravel (for infrastructure integration), Bash.
- **Databases:** MySQL (optimization, replication), Redis (caching/queues).
- **Webservers:** Nginx.
- **Architecture:** Microservices, REST APIs, MVC, Domain-Driven Design (DDD), CQRS.
- **Code Quality:** SOLID principles, DRY, KISS, OOP, Design Patterns, Datastructures, Algorithms.

### Collaboration & Process

- Git/GitHub, Agile/Scrum, Jira.
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# DevOps Projects

## End-to-End Kubernetes Microservices Pipeline

[GitHub](#)

*Automated deployment pipeline for microservices on Kubernetes end-to-end (E2E) DevOps automation pipeline for deploying microservices using modern DevOps tools*

- Built CI/CD with **GitHub Actions** using self-hosted runners
- Provisioned **Kubernetes clusters** via **Terraform** and **Ansible**
- Implemented **Helm charts** for service deployment
- Configured **service meshes** and **ingress controllers**
- Technologies: Kubernetes, Terraform, Helm, GitHub Actions

## Production-Grade Web Stack with Docker Mesh

[GitHub](#)

*A production-ready, full-stack web application deployment using Docker Compose with multi-tier networking, horizontal scaling, and service orchestration.*

- Deployed a scalable **React + Node.js + MySQL** application stack behind **Nginx load balancers**
- Configured **horizontal scaling** for Node.js services and load balancing with Nginx
- Integrated **Redis** for caching and **phpMyAdmin** for database management
- Managed **secure networking** with separate public/private subnets and SSL support
- Automated deployments with custom Docker Compose files and environment-specific configurations
- Technologies: Docker Compose, React, Node.js, Nginx, MySQL, Redis, phpMyAdmin, Shell Scripts

## IaC-Managed Docker Swarm Cluster

[GitHub](#)

*full multi-node Docker Swarm cluster using Vagrant, VirtualBox, and Docker Compose v3.9. It includes a sample microservices architecture with:*

- Automated **Docker Swarm cluster** provisioning using **Vagrant**
- Deployed microservices with **service replication** and **rolling updates**
- Configured **distributed storage** and **network overlays**
- Technologies: Docker Swarm, Vagrant, VirtualBox

## Monitoring Stack on Kubernetes (Prometheus/Grafana/Jenkins)

[GitHub](#)

*A lightweight DevOps stack for local Kubernetes environments using Helm and Minikube. Automates the deployment of Jenkins (CI/CD), Prometheus (monitoring), and Grafana (visualization) for rapid DevOps workflows and testing.*

- Deployed **Jenkins, Prometheus & Grafana** on Minikube via **Helm**
- Configured **custom dashboards** and **metric scraping**
- Set up **persistent storage** for time-series data
- Technologies: Kubernetes, Helm, Prometheus, Grafana

## Backend Projects

### Laravel Multi-Vendor E-commerce Platform API

[GitHub](#) A robust and scalable RESTful API built with Laravel supporting vendor onboarding, product management, inventory, order processing, and settlements.

- Secure multi-vendor authentication & authorization (Sanctum)
- Product and variation support
- Vendor store and warehouse management
- Orders, carts, and checkout workflows
- Payment & settlement system
- Reporting, analytics, webhooks, and full test coverage
- **Stack:** Laravel 10+, MySQL, Redis, Laravel Queues, PHPUnit

### Laravel-Multi-Gateway-Payments

[GitHub](#) A modular and extensible Laravel project for integrating multiple payment gateways (e.g., Stripe, Tap, PayPal, etc.) with unified interfaces, secure webhook handling, and clean service-based architecture.

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## Education

**Faculty of Medicine**, Sohag University, Egypt

2019 – 2025

*Note: Self-taught DevOps/Cloud engineering through projects and certifications while completing medical degree.*

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## Languages

- **Arabic:** Native
- **English:** Professional Proficiency