

Abdullah Sameh

DEVOPS ENGINEER

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SUMMARY

Data Science student with strong hands-on DevOps experience spanning Kubernetes orchestration, GitOps delivery, cloud infrastructure automation, and full-stack containerization. Built and deployed production-grade systems including a live federated social media platform on Kubernetes. Focused on cloud-agnostic, maintainable architectures and automation-first practices.

TECHNICAL SKILLS

Cloud	AWS (EC2, S3, IAM, VPC, EKS, CloudFront, CodeDeploy)	Observability	Prometheus, Grafana, Loki, Tempo, OpenTelemetry
Containers & Orchestration	Docker, Kubernetes, Helm, Kustomize	IaC	Terraform, Packer
CI/CD & GitOps	GitHub Actions, ArgoCD, CodeDeploy	Scripting	Bash, Python

PROJECTS

Mastodon — Production Kubernetes Deployment (Federated Social Media Platform) github.com/mastodon-DevOps-version

- Deployed a live federated social media platform on Kubernetes with separate microservice deployments for **web**, **streaming**, and **Sidekiq** background workers.
- Self-hosted PostgreSQL using **CloudNativePG** with a primary + replica setup for high availability, avoiding any dependency on managed DB services.
- Abstracted the storage layer with **Longhorn CSI**, making the entire deployment cloud-agnostic and decoupled from any specific cloud provider's block storage.
- Cost-optimized node architecture: stateless app tier on **Spot instances**; stateful data services (PostgreSQL, MinIO, monitoring) on **On-Demand nodes**.
- Built two independent CI/CD pipelines via **GitHub Actions** — one for the app, one for infrastructure — both synced through **ArgoCD GitOps**. TLS via cert-manager, secrets via Sealed Secrets.

MERN E-Commerce — AWS 3-Tier Production Architecture github.com/Passw0rd404/mern-ecommerce-DevOps-version

- Deployed a full-stack MERN app on AWS using a 3-tier architecture: **CloudFront** → **NLB** → **EC2 Auto Scaling Group** in a private subnet, with **ElastiCache** and **MongoDB Atlas** via PrivateLink.
- Two separate pipelines: frontend via S3 + CloudFront invalidation; backend via **CodeDeploy** blue/green. Infrastructure provisioned with **Terraform**, AMIs baked with **Packer**.
- Secured with OIDC keyless AWS auth, IaC scanning (TFLint, Terrascan, Checkov), and code quality gates (ESLint, Semgrep, OpenSSF Scorecard).

HiveBox — IoT Temperature API (Built from Scratch) github.com/Passw0rd404/HiveBox

- Wrote a **FastAPI** application from scratch aggregating real-time temperature data from global IoT sensors (OpenSenseMap API); containerized and deployed locally on **kind**.
- Integrated **Valkey** caching, Prometheus metrics, and a Grafana dashboard — full local observability stack without any cloud dependency.

HealthAI Labs — AI-Powered Health Platform (Built from Scratch) github.com/co-op-projects/HealthAI-Labs

- Built an AI health application from scratch integrating LLM APIs; containerized with **Docker Compose** — first experience shipping an AI-integrated service end to end.
- Practiced multi-service orchestration, environment variable management, and team collaboration with Git branching and pull request workflows.

EDUCATION

Bachelor's in Data Science, Faculty of Artificial Intelligence Expected 2028
Minoufia University — Egypt · GPA: 3.01

CERTIFICATIONS

AWS DevOps — 90% Amazon Web Services [View credential](#) ↗
McKinsey Forward Program McKinsey & Company [View credential](#) ↗