

# Youssef Elharty

+201021194024 | ✉ [youssefashraf246@gmail.com](mailto:youssefashraf246@gmail.com) | [in](https://www.linkedin.com/in/youssefelharty) [youssefelharty](https://www.linkedin.com/in/youssefelharty) | [GH](https://github.com/HartyPotter) [HartyPotter](https://github.com/HartyPotter) | Military status: [Exempted](#) | [Portfolio](#)

## SKILLS

---

- **Languages:** Python, JavaScript, TypeScript, C/C++, SQL, HTML/CSS
- **Infrastructure & Cloud:** AWS (EC2, S3, RDS, IAM, ECS, EKS), Terraform, Ansible
- **Containerization & Orchestration:** Docker, Kubernetes, Helm, Istio
- **CI/CD & Automation:** Jenkins, GitHub Actions, GitLab CI/CD
- **Networking & Security:** Nginx, Load Balancing, API Gateway, OAuth, Role-Based Access Control (RBAC)

## EDUCATION

---

**Egypt-Japan University of Science and Technology** | Alexandria, Egypt Oct. 2020 – Feb. 2025  
*B.S. Computer Science and Engineering*

## PUBLICATIONS

---

**BlockCampus: A Blockchain-Based DApp for enhancing Student Engagement and Reward Mechanisms in an Academic Community for E-JUST University** | *11<sup>th</sup> ICIEV* Sep. 2022 – Jun. 2023  
[arXiv: 2307.11662](https://arxiv.org/abs/2307.11662)

## EXPERIENCE

---

**DevOps Engineering Trainee** | *DEPI* Apr. 2024 – Oct. 2024

- Automated infrastructure processes using Terraform and Ansible for streamlined provisioning and configuration.
- Designed and maintained CI/CD pipelines using Jenkins and GitHub Actions to enable automated builds, testing, and deployment.
- Deployed and managed containerized applications using Docker and Kubernetes, ensuring high availability and scalability.
- Explored AWS services such as EC2, S3, RDS, and IAM to build cloud-based solutions.

## PROJECTS

---

**Graduation Project: AI-Driven Electronic Health Record System** | *Grade: A+* | [GitHub](#) Feb. 2025

- Led backend development using microservices architecture, ensuring scalability, performance, and healthcare compliance.
- Utilized a polyglot persistence strategy (PostgreSQL, MongoDB, Redis) to optimize data storage and retrieval.
- Automated CI/CD pipelines (GitHub Actions, Docker, AKS) for streamlined deployments and efficient scaling.
- Integrated Llama3-OpenBioLLM-70B and ViT X-ray models, achieving 97.42% pneumonia detection accuracy and strong AI summarization performance (ROUGE-L ~0.7, BERTScore F1 > 0.85).

**Codomain Expansion: Cloud-based IDE** | *Nest.js, PostgreSQL, Redis, Docker, React* | [GitHub](#) Sep. 2024

- Designed and deployed a scalable cloud-based IDE using Nest.js, PostgreSQL, and Redis.
- Implemented Docker-based isolated environments for secure, multi-language code execution.
- Developed real-time collaborative features using WebSockets and event-driven architecture.

**Graph Analysis of Citation & Co-authorship Networks of Egyptian Authors** | *Python, Networkx* | [GitHub](#) Dec. 2023

- Developed a system analyzing citation and co-authorship networks of 31,508 Egyptian publications, using web scraping and the Semantic Scholar API to gather 13,027 researcher profiles.
- Implemented graph algorithms (NetworkX) to calculate centrality measures, revealing influential publications and authors and 286 distinct research communities.
- Conducted temporal analysis and degree distribution studies to uncover publication trends and the impact of Egyptian research.
- This analysis provides data-driven insights for academic institutions and research policy development in Egypt.