

Ahmed Mohamed Yousry

Backend Engineer | Scalable Systems & API Architecture | ACPC Finalist

El-Haram, El-Giza, Cairo

ahmed.yousry.career@gmail.com

[linkedin.com/in/ahmed-mohamed-yousry-0101](https://www.linkedin.com/in/ahmed-mohamed-yousry-0101)

github.com/Ahmed-Arafat10 | ahmedarafat.vip | [youtube.com](https://www.youtube.com)

Summary

Backend Engineer with 3+ years of experience building **scalable data-intensive systems** and **high-performance APIs** across government and enterprise platforms in Egypt, Saudi Arabia, the USA, and Australia. Delivered **17+ projects**, **1,000+ API endpoints** and **300,000+ lines** of production code across systems serving **50,000+ users** and handling **1M+ requests**. **ACPC Finalist** with 1,000+ solved algorithmic problems.

Projects

FilmSA – Saudi Ministry of Culture | [Website](#) | *PHP, Laravel, MySQL, REST APIs, Linux* **2025**

- Engineered backend systems for a **large-scale platform** supporting film production workflows and **cash rebate programs up to 40%**.
- Designed a **highly normalized database schema (200+ tables)** to support complex business domains with scalability, consistency, and long-term maintainability.
- Implemented **multi-stage workflow engines** for rebate processing, handling **150+ file types** and **15+ interdependent forms** with strict validation and business rules.
- Contributed **70% of backend development**, delivering **350+ RESTful APIs** with optimized queries and performance-focused design.

DAEM – Saudi Ministry of Investment | [Website](#) **2025**

- Engineered backend systems for a **financial decision-support platform** analyzing publicly listed companies and sector performance.
- Designed a **custom backend text processing algorithm** and **data processing pipeline** to extract and structure financial data from OCR-generated reports, leveraging **Elasticsearch-based search pipelines** for high-accuracy retrieval.
- Architected a **normalized PostgreSQL schema (80+ tables)** and implemented computation logic for **20+ financial ratios** at both company and sector levels.
- Processed **90+ financial reports across 32 firms (2021–2023)** with **98% data extraction accuracy**, enabling reliable financial insights and analysis.

Buy2 – Employee Management Platform (USA) | [Website](#) | *PHP, Laravel, MySQL, REST APIs, Linux* **2024**

- Sole backend engineer responsible for designing and delivering a **full-scale employee management system** supporting web and mobile applications.
- Architected and implemented systems like Jira for **task and project management**, **KPI tracking**, **attendance monitoring** (check-in/out & breaks), rewards/voucher management, and **performance** evaluation.
- Developed a comprehensive **admin dashboard** supporting employee accounts, departments, sites, **shift scheduling**, **events**, and **role-based access control (RBAC)**.
- Engineered a **complex shift management module** handling **multi-constraint validation** (site schedules, employee availability, qualifications, overtime rules, and template-based scheduling).

Uniers Academy – Multi-Level Marketing Platform | [Website](#) | *PHP, Laravel, MySQL, REST APIs* **2024**

- Engineered backend systems for a **commission-based platform** with **referral tree structures** and integrated **e-wallet management**.
- Designed optimized **tree data structures** and **traversal algorithms (BFS)** to efficiently process **hierarchical referral networks** and compute client network metrics for **6,000+ nodes** in the tree.
- Built high-performance query logic achieving **1.6 ms response time** for complex network computations across **200k+ production records**.
- Contributed to a system generating **12M+ EGP revenue within 6 months (\$220K USD)**, supporting scalable growth and financial operations.

Graduation Projects Management System (GPMS) – Capital University | [Website](#) **2026**

- Architected and deployed a **production system replacing a 15+ year** manual Excel-based work for managing graduation projects for level 4 students in BIS department, Capital University.
- Designed **role-based dashboards** and strict ability-based access control serving students, supervisors, and administrators.
- Engineered core** workflows including **multi-layer team registration validation**, structured complaint lifecycle management, queue-driven email notifications, and **automated CLI pipelines** for bulk data operations.
- Reduced registration time from 4 months to 1 week**, supporting **1,100+ students**, **8,000+ student/admin/doctor sessions**, **1,500+ system emails**, and **32,000+ database records** with **zero downtime**.

Sections Registration System (SRS) – Capital University | [Website](#) 2026

- Developed and deployed a **production** university course sections registration system supporting **concurrent-safe** enrollment using **database-level locking** to handle sections' max capacity during high traffic.
- Engineered a custom **multi-rule validation** engine to enforce **complex** constraints and **academic policies**.

Laravel All-In-One Toolkit – Open-Source Package | [Packagist](#) 2026

- Developed an **open-source Laravel package** that standardizes backend development patterns and accelerates API implementation across projects.
- Implemented **unified API response** formatting, modular validation rule composition, and **dynamic query filtering** with search and sorting support.
- Added advanced **pagination utilities**, robust date parsing/formatting helpers, and file & Excel data processing tools.

Work Experience

Next Economics & Technology

Sep. 2024 – Mar. 2026

Backend Engineer (Laravel/PHP)

Fifth Settlement, Egypt

- Led backend development for large-scale government platforms including **DAEM** and **FilmSA**, delivering high-performance RESTful APIs and scalable system architectures.
- Built and optimized **production-grade APIs**, database schemas, and business logic with a focus on performance, scalability, and maintainability.

Capital University, Business Information System (BIS)

Mar. 2024 – Sep. 2024

Teaching Assistant

El-Zamalek, Egypt

- Taught **4,000+** students Backend (PHP, OOP, MySQL), Advanced Database, System Analysis, Linux.
- Conducted **550+** lab sessions with **50,000+** views & **7,200+** watch hours on YouTube.

InnovaDigit Software Solutions

Mar. 2024 – Oct. 2024

Co-Founder & Backend Engineer

Naser City, Cairo

- Led backend development for multiple production systems including **Unifers Academy (WinLife)** and **TSCMS**.
- Designed and implemented **scalable backend architectures**, including complex business logic, hierarchical data models, and secure API systems.
- Owned system design decisions, database architecture, and performance optimization across high-traffic applications.

Grand Technology

Sep. 2023 – Sep. 2024

Backend Engineer (Laravel/PHP)

Capital Business Park, El-Shekh Zayed, Egypt

- Developed and optimized **RESTful APIs** for production web and mobile applications using Laravel.
- Integrated third-party payment gateways and collaborated with QA to improve system reliability and performance.

Education

Master Degree (MSc), Capital University

Sep. 2023 – Present

Master in Computer Science, Postgraduate Business Information Systems (PBIS)

El-Zamalek, Egypt

CGPA: 3.7/4.0 — 1st Rank in preliminary year

Bachelor Degree, Capital University

Aug. 2018 – Aug. 2022

Business Information Systems (BIS) Graduate

El-Zamalek, Egypt

CGPA: 3.94/4.00 — 1st Rank, Excellent with Honors

Graduation Project (K-Hub): **A+**, Best Project in College

Technical Skills

- **Programming:** PHP, C++, Java
- **Backend Engineering:** Laravel, RESTful APIs, OpenAPI, JWT, Sanctum, Rate Limiting, Queues, Event-Driven Systems
- **Databases:** MySQL, PostgreSQL, SQL Server — Schema Design, Query Optimization, Indexing, Transactions, Migrations
- **System Design & CS:** Data Structures & Algorithms, OOP, SOLID, MVC, Caching, Performance Optimization, Distributed Systems Concepts
- **DevOps & Infrastructure:** Linux, Bash Script, Docker/Docker Compose, AWS (EC2, S3, ECS, ECR), Jenkins CI/CD, FrankenPHP/Caddy, Nginx/Apache, VPS, CronJobs, Supervisors
- **Security:** RBAC, Input Validation, Cryptography
- **Tools:** Git, Postman, Swagger, Jira, Notion, pgAdmin, TablePlus
- **Achievements:** Solved **1000+** algorithmic problems (Codeforces, LeetCode, HackerRank)
- Familiar With React JS, Node JS, Express JS, MongoDB (MERN Stack), JSON, YAML.

Extracurricular Experience

Competitive Programming

- **ACPC Finalist** at Africa and Arab Collegiate Programming Championship (**ACPC**) Aug. 2025
 - Ranked **3rd** among **50** teams from **Helwan** University and **10th** among **200** teams in the **ECPC Qualifications Day**.
 - Ranked **3rd** among **Helwan** University teams and **90th** among **300** teams in **ECPC**, qualifying for **ACPC**.