

Youssef Tarek

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Summary

Computer Engineering student graduating in 2027 with experience building full-stack web applications and distributed systems using React/Next.js, TypeScript, Python, C/C++, Node.js, REST APIs, and SQL/NoSQL databases. Co-founded **Yaleeq** (900+ users) and built real-time and distributed systems, applying data structures, algorithms, OOP, software design, and Agile teamwork.

Education

Ain Shams University — B.Sc. Computer Engineering	2027
Dual Degree Program with University of East London	
University of East London — B.Sc. Computer Science	2027

Projects

Yaleeq — Internship & Job Discovery Platform	Next.js / React · TypeScript · n8n	Feb 2025 – May 2026
- Co-founded and built an internship discovery platform for Egyptian students, serving 900+ users - Built automated backend data-aggregation pipelines with n8n and scraping services across 10 sources, processing 90 jobs/day - Developed React/Next.js landing-page and job-discovery UI flows; applied Hexagonal Architecture to isolate business logic from infrastructure - Built a Retrieval-Augmented Generation (RAG) conversational search system for querying job listings		
ERPCT — Cross-Platform ERP & E-Invoicing System	React Native · Electron · NitroJS · Node.js · C#	Oct 2024 – Present
- Built an Enterprise Resource Planning (ERP) and e-invoicing system for Egyptian businesses, supporting tax compliance, quoting, and invoicing - Developed a monorepo with ports and adapters so shared business logic runs across React Native, Electron, CLI, and a NitroJS serverless API - Built a mobile invoicing pipeline from quote to digitally signed e-invoice in under 2 minutes; implemented a message-queue and WebSocket backend worker for real-time Tax Authority delivery - Built a GitHub Actions workflow that builds and deploys the application automatically on each push - Designed PostgreSQL caching tables that pre-compute results per user view to maintain read performance as data volume grows		
LLM Cluster Orchestrator — Distributed Inference System	Go · Python · gRPC · Docker · ChromaDB · Ollama	2025
- Built a master-agent-worker distributed inference system that routes 1000+ concurrent requests using least-connections and round-robin across Go workers - Ran local Ollama models across multiple devices through a central master node for coordinated inference - Auto-scaled Dockerized Python worker containers from live queue-depth and CPU/RAM signals, enabling workers to spawn and stop without manual intervention - Integrated ChromaDB RAG retrieval and a real-time TUI for health monitoring and fault-tolerance handling		
Molly — Real-Time Team Messaging Platform	Next.js / React · Node.js · Express · MongoDB · WebSockets	2024
- Built a Slack-inspired messaging platform with a Next.js/React frontend, Node.js/Express backend, MongoDB, threaded channels, and real-time chat - Built the full authentication flow, including sign-up, login, protected routes, and session handling - Structured the backend with a Model-View-Controller (MVC) architecture and implemented WebSocket-based communication for live messaging - Added caching and lazy loading while maintaining a real-time API for responsive message delivery		
Technical Skills		
Languages	JavaScript TypeScript C++ Go C SQL C# HTML/CSS Python	
Frontend	React Next.js React Native Electron TailwindCSS	
Backend & Databases	Node.js REST APIs PostgreSQL MongoDB gRPC WebSockets Message Queues	
Software Engineering	Data Structures & Algorithms Object-Oriented Programming Software Design Patterns Unit Testing System Design Distributed Systems	
CS Foundations	Database Internals Operating Systems Internals Computer Networks	
Tools	Git GitHub GitHub Actions Docker Linux Agile/Scrum	