

Ahmed Talaat ElBalka

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Education

Suez Canal University

October 2025

Bachelor of Medicine, Bachelor of Surgery (M.B.B.Ch.) – 72.01%

Experience

Technical Co-Founder

Dec 2025 – Present

Kiwi World

- Architected a subscription-based medical assessment platform using Next.js, TypeScript, and PostgreSQL, supporting secure assessments, subscriptions, and administrative workflows.
- Developed an assessment engine that generates balanced examinations using proportional stratified sampling across hierarchical medical topics.
- Designed a transactional audit system enabling reversible administrative operations while maintaining data consistency across core platform entities.
- Reached 2,000+ signups within the first week of launch.

AI Research Collaborator

Jun 2025 – Present

Suez Canal University Hospital

- Built a data pipeline combining public MRI datasets with a self-collected labeled dataset, converting 3D volumes to normalized 2D slice sequences with spatially-consistent augmentation, and splitting by patient rather than slice to prevent data leakage.
- Designed and tested a series of controlled experiments across architecture, loss function, and data configuration changes, using ablation studies to isolate what actually drove performance gains.
- Maintained structured logs of each experiment's configuration, results, and rationale, and used documented outcomes to decide the next architecture or hyperparameter change.
- Applied clinical training as a physician to label MRI lesion data alongside radiologists, ensuring ground-truth annotations met both medical and engineering accuracy standards.

Full-Stack Developer (Contract, Remote)

Mar 2025 – Dec 2025

Nerus Design Studios

- Developed production web applications using React, Laravel, Node.js, and WordPress for multiple international clients.
- Served in a technical leadership role by planning engineering tasks, reviewing code, mentoring junior developers, and contributing to architectural decisions.
- Collaborated across the full software development lifecycle, translating business requirements into scalable technical solutions.

Full-Stack Developer (Full-time, Remote)

Aug 2024 – Dec 2025

Newvad Tech House

- Architected modular web and cross-platform mobile applications using Angular, Flutter, and Node.js, including FlexaStay, a cross-platform travel booking platform serving web, Android, and iOS.
- Implemented real-time communication, cloud messaging, mapping services, and authentication systems supporting production mobile and web applications.
- Mentored and onboarded junior developers, conducted one-on-one code reviews, ran regular task-planning meetings, and contributed to hiring interviews and performance evaluations.

Founder

Aug 2022 – Aug 2024

HELIX Medschool

- Built a cross-platform educational platform in Flutter backed by a hybrid cloud architecture combining Cloud Firestore and object storage for scalable content delivery.
- Built a crowd-sourced error reporting system allowing students to flag question inaccuracies, with an admin workflow to review and apply corrections.
- Grew adoption to 1,000+ downloads and 20,000+ completed practice tests within a few months of launch.

Technical Skills

Systems & Software Engineering

- Full-stack software system design across web, mobile, and cloud architectures
- Algorithm design and analysis, including concurrency control and race condition handling in high-traffic systems
- Authentication and authorization architecture, including role-based access control and permission models

Machine Learning & Research Methodology

- Data pipeline development, from ingestion and preprocessing to normalization and validation
- Experimental design and ablation analysis for isolating performance drivers in model development
- Iterative model architecture evaluation and hypothesis-driven refinement
- Structured research documentation and evidence-based decision-making across experimental phases

Leadership & Interdisciplinary Collaboration

- Technical mentorship, including onboarding, code review, and performance evaluation
- Interdisciplinary collaboration between clinical and engineering teams
- End-to-end product ownership, from architecture through deployment and adoption

Certifications

GTx Professional Certificate — Data Structures and Algorithms	Jul 2026
• CS1332xIV: Data Structures & Algorithms IV	Jul 2026
• CS1332xIII: Data Structures & Algorithms III	Jun 2026
• CS1332xII: Data Structures & Algorithms II	May 2026
• CS1332xI: Data Structures & Algorithms I	May 2026
HarvardX Professional Certificate — Computer Science for Artificial Intelligence	Apr 2026
• CS50AI: Introduction to Artificial Intelligence with Python	Apr 2026
• CS50x: Introduction to Computer Science	Jun 2025
Udacity Front End Web Development Professional Nanodegree	May 2021
Udacity Android Basics Nanodegree by Google	Jan 2021