Mahmoud Yassin

Software Engineer

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PROFILE

Software engineering candidate and student founder skilled in Flutter/Dart, Python, Firebase, and Git, with a track record of buikling impactful apps. Creator of Flousy (AI financial planner) and developer of the AI VAR for Squash (computer vision project in progress). Combines strong technical expertise with critical thinking, leadership, and resilience, proven both in projects and as a Top-50 17 Squash player in Egypt.

EDUCATION

High School Diploma
Dr. Nermien Ismail Schools (NIS)
4.0 GPA | Predicted Valedictorian

09/2022 – 06/2026
Port Said, Egypt

Junior Presidential Leadership Program (NTA)
National Training Academy
National program emphasizing critical thinking, leadership, teamwork, ommunication, and problem-solving skills for future leaders.

08/2025 – 09/2025
Cairo, Egypt

PROFESSIONAL EXPERIENCE

Intern
Dr. Nermien Ismail Schools

05/2025 – Present
Remote

- Collaborated on the NIS Parents app, contributing to small feature updates and stability improvements.
- Completed assigned tweaks and bug fixes, reproducing issues and resolving them efficiently.
- Tested new builds end-to-end and filed clear, step-by-step bug reports with evidence.

Freelance Developer
Self-Employed

05/2023 – Present
Port Said, Egypt

- Delivered websites/apps for local businesses using HTML, CSS, JavaScript, PHP and Flutter.

Local Coding & Robotics Instructor
Techno Square

06/2025 – 09/2025
Port Said, Egypt

- Teach K–12 coding and robotics through project-based lessons, developing curriculum and mentoring students to build and debug working prototypes.

RESEARCH EXPERIENCE

AI VAR for Squash (Computer Vision)
SquashVAR: Single-Camera Geometry-Aware Assistant Referee for Squash

08/2025 – 12/25

- Built an end-to-end AI "VAR" prototype for squash: ball detection + tracking from match video using Python and modern CV pipelines.
- Implemented plane-aware court mapping (front wall/floor/side walls) and homography-based projection to real-world court coordinates for event analysis.
- Designed rule-based impact detection from ball kinematics (velocity/acceleration/ heading change) to flag wall hits and floor bounces; generated timestamped event logs.
- Developed calibration tools (polygon gating + per-plane homographies) and produced an overlay video visualizing trajectories, plane assignment, and detected impacts.
- Iterated on accuracy/latency via evaluation loops, threshold tuning, and robust handling of noisy detections/tracks.

PROJECTS

Flousy   01/2025 – Present
AI Financial Planner App
- Built a mobile financial-planning app for Egyptians, using Flutter with Firebase Authentication and persistent user profiles.
- Designed core features: expense tracking, budget allocation, bill reminders/ recurrence, and bilingual UI (Arabic/English) optimized for quick daily use.
- Implemented an AI-driven planning flow that converts user inputs (income, fixed costs, goals) into a personalized monthly budget plan and re-evaluation suggestions.
- Delivered with clean engineering practices: Git-based version control, field validation, iterative releases, and end-to-end testing/bug fixing.

Co-Founder-Peer Tutoring Program   06/2025 – Present
Built a tutoring model scaled across 7 campuses of NIS; recognized by Egypt's Minister of Education.

Solar Share   09/2024 – 05/2025
- Peer-to-peer solar-energy prototype (JavaScript, Firebase); Ignited Hackathon-Best Idea (+2,000,000 virtual funding).
- Led requirements, rapid prototyping, live demo, and technical pitch.

AWARDS

USA Computing Olympiad (USACO) - Gold Division   01/12/2025
USACO

Ignited Hackathon-Best Idea (+2,000,000 virtual funding)   01/04/2025
Ignited Competition Hackathon

Speech Competition - Ist Place (Special Awards Category), across all NIS campuses   01/03/2025
Dr. Nermien Ismail Schools

Alabakera Schools League (Season 7), AASTMT-Second Place (Delta-region Math)   01/01/2025
Arab Academy for Science, Technology & Maritime Transport

Egypt U-17 Squash - Top 50   01/12/2023
Egyptian Squash Federation

Cognia Mathematics-Advanced Level, Certificate of Excellence, 99th Percentile   01/12/2021
Cognia
(final exam exemption)

Ist Nationals Percussionist-Award-Winning Duet   01/12/2017
Conservatory of Music

SKILLS

Programming Languages
Flutter (Dart), Python, JavaScript, Java, PHP, HTML, CSS

Platforms & Tools
Firebase (Authentication), Node.js, Git, GitHub, VS Cod droid Studio

Computer Science
Object-Oriented Programming (OOP), Data Structures & Algorithms, Unit Testing, Debugging, Problem Solving

Soft Skills
Communication, Leadership, Teamwork, Critical Thinking, Time Management, Adaprability, Ownership, Attention to Detail, Customer Focus

Working Methodologies
Agile/Scrum basics, Issue Triage, Code Reviews, Documentation

COURSES

Machine Learning with Python: from Linear Models to Deep Learning.
MITx

09/2025 – 12/2025
Online

Data Science: Linear Regression
Harward edx

06/2025 – 06/2025
Online

Data Science: Wrangling
Harward edx

05/2025 – 06/2025
Online

Data Science: Productivity Tools
Harward edx

05/2025 – 05/2025
Online

Data Science: Inference and Modeling
Harward edx

04/2025 – 05/2025
Online

Data Science: Probability
Harward edx

04/2025 – 04/2025
Online

Data Science: Visualization
Harward edx

03/2025 – 04/2025
Online

Data Science: R Basics
Harward edx

03/2025 – 03/2025
Online

CS50's Introduction to Artificial Intelligence with Python
Harward edx

01/2025 – 03/2025
Online

CS50's Introduction to Programming with Python
Harward edx

11/2024 – 01/2025
Online

CS50's Introduction to Computer Science
Harward edx

09/2024 – 11/2024
Online

Data Science: Builiding Machine Learning Models
Harward edx

06/2025 – 08/2015
Online

LANGUAGES

Arabic ● ● ● ● ●

English
IELTS (8.5), C2 ● ● ● ● ●

German ● ● ● ○ ○

French
Az A1 ● ● ○ ○ ○

Spanish
A ● ● ○ ○ ○