

# Mohamed Wael Abdelaziz

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## Professional Experience

### Full-Stack Developer – Full Time

Sept 2024 - Current

OVARC

Cairo, Egypt

- Developed most of the frontend using React.js to create a responsive Single Page Application (SPA).
- Integrate frontend with backend using React Query for optimized data fetching and state management, ensuring minimal latency in the communication with Node.js/Express APIs and a smooth, responsive user experience.
- Implemented AWS S3 for secure and scalable file storage, enabling upload and retrieval of documents and assets.
- Played a key role in bringing the web app live, enabling OVARC to deliver a platform that improved business operations and helped both local and international clients manage complex HR and payroll tasks more effectively.
- Lead incoming interns, guiding them to understand and accomplish their daily tasks.

### Teaching Assist – Part Time

Oct 2024 – Jan 2025

Arab Academy for Science, Technology and Maritime Transport

Giza, Egypt

- Assisted in grading assignments, exams, and reports, maintaining detailed records for over 100 students.
- Prepared lecture materials and created additional resources as quizzes or practice exercises to reinforce their learning.

### Embedded Systems On Chip Summer – Training

July 2023 – Sept 2023

Virginia Tech

Virginia, USA

- Implemented Systems on a Chip (SoC) solutions, focusing on hardware and scheduling to help in optimizing the performance.

### Data Analyst – Intern

July 2023 – Aug 2023

National Telecom Regulatory Authority of Egypt (NTRA)

Giza, Egypt

- Used Power BI and Dimension Modelling to visualize data and provide clearer insights for better business decision making.

## Education

### Bachelor of Science degree in Computer Science (GPA 3.95 *First in Class*)

2020 – 2024

Arab Academy for Science, Technology and Maritime Transport

Giza, Egypt

Achieved Certificate of Appreciation for Academic Excellence for the 1<sup>st</sup>, 3<sup>rd</sup>, 4<sup>th</sup>, and 8<sup>th</sup> Semesters.

## Skills

- TypeScript | JavaScript | React | Node | Express | MySQL | Git | Linux | Java | Python | C/C++ | Flask | Tailwind CSS
- Full-Stack | Frontend | Backend | OOP | RESTful APIs | Generative AI | Figma | Selenium Testing | English, Arabic

## Projects

### Smart Tutoring System (Graduation Project)

- Developed a system with 3 Generative AI tools: Text-to-Motion Generation, Arabic Text Generation, and Animating Metahuman.
- Implemented Text-to-Motion Generation using VAE and Diffusion models in PyTorch, producing corresponding motion for a meshed human character based on textual descriptions, which improved the diversity score to  $9.720 \pm 0.082$ .
- Built React.js frontend and Flask backend for user prompts, with data storage on Firebase to enable users to access our AI tools.
- Project was accepted for funding by the ITAC Graduation Project Support Program.

### Health Assistant Web Application

- Developed a web app with Mental and Physical Health Assistants to diagnose user symptoms by asking a series of questions.
- Built with HTML5, CSS3, JavaScript to capture user symptoms as a JSON object for easier transmission to the backend.
- Flask RESTful APIs process the data and generate predictions using a trained SVM model, delivering personalized health insights.

## Activities

### Senior AI Member at INVNT Robotics Club

Sept 2023 – June 2024

Arab Academy for Science, Technology and Maritime Transport

Giza, Egypt

- Contributed to the development of a robot utilizing stereo vision for motion and navigation.
- Gave theoretical and hands-on experience on computer vision and supervised machine learning for students.

### Volunteered for the "Artificial Intelligence and Online Games" AAST's Booth

Feb 2024

Bibliotheca Alexandria

Alexandria, Egypt

- Assisted applicants with their application and inquiries about the artificial intelligence and machine learning fields.