

AHMED GALAL ELZEKY

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EDUCATION

ESLSCA University / Computer Science B.S.

Sep. 2021 - Sep. 2024, Cairo, Egypt

Human Academy / Japanese Language and Business Manner *Oct. 2024 - Jan. 2025, Japan(Remote)*

EXPERIENCE

AI Engineer, Intelligent Systems I-Sys

Feb. 2025 - Present

- Collaborated the deployment of **Watsonx**-powered self-service robots, kiosk avatars, and omni-channel conversational AI systems that enhance customer engagement across our partner Telecommunication and banking companies **Vodafone** and **Bank Misr**.
- Developed custom NLP modules within Watsonx.ai to support multilingual interactions in Arabic's regional dialects (Egyptian and Saudi) with high accuracy—to ensure a seamless customer experience.
- Leveraged **IBM Watsonx** to power event robots that enabling features like automated registration (with ID/QR code scanning and instant photo printing), interactive demonstrations, and real-time feedback collection.

AI Developer Intern, Eviron Adapt

Aug. 2024 - Oct. 2024

- Using **Tensorflow** and **OpenCV** to create **Siamese Networks** that was used in an **image recognition model** to distinguish between identical trash bales and bales viewed from different angles, automating a previously manual task and significantly reducing company costs in storage and payments by thousands of Egyptian pounds.
- **Designed and implemented a validation model** to assess image quality against stakeholder-defined requirements, ensuring compliance and improving precision in image verification processes.

AI Developer Intern, ESLSCA University

Feb. 2024 - Apr. 2024

- Developed a project, earning ESLSCA University **The Times Highest Higher Education Award 2024** in Technological/Digital Innovation at the **Arab Summit of Universities, Dubai**.
- Used **Langchain** Framework and **OpenAI Function Calling** to build a GPT-powered chatbot that guides prospective students, provides real-time updates, and **automates document processing** and verification.
- **Streamlined admissions** by reducing processing times, enhancing communication, and reallocating staff for personalized support, boosting efficiency.
- Integrated **Chroma Vector Database** and **RAG** to provide the chatbot for **contextual awareness**.
- Worked on **Django backend** and seamlessly connected it with the **React frontend** via **RESTful APIs**, ensuring efficient system integration.

Software Developer Intern, IIG-HEC

Jun. 2023 - Dec. 2023

- Website Link: www.iig.land
- Website developed using **ReactJS**, showcasing the company's projects.
- Real-time blog post system using **Firebase Storage** and **Firestore**.
- Deployed the website on **Vercel** serverless hosting.

- Used **C#** to implementing player mechanics and complex AI behavior of NPCs and player interactions.
- Gained a clear understanding of **Object-Oriented Programming**
- Refine tasks to help to achieve the vision of the game designer.

OUTSTANDING ACHIEVEMENTS

- Published a **Journal of Elsevier's Procedia Computer Science**. Journal name: **Multi-Hop Arabic LLM Reasoning in Complex QA**. Presented in **ACLing 2024**, the 6th International Conference on AI in Computational Linguistics in Dubai,UAE. [Link to Paper Here](#)
- Worked on project with my university that has been awarded **The Times Highest Higher Education Award 2024** in Technological or Digital Innovation category in the Arab Summit of Universities in Dubai University. [Link to Post Here](#)
- My Startup GPTuBE has been named one of the Top 3 finalists in the **GESAwards 2024 Africa** and will represent Egypt and North Africa in the **Global GESAwards**. [Link to Post Here](#)

PROJECTS

- **Brillium**

An **AI-powered LMS** that transforms a PDF textbooks into interactive digital learning experiences. The system uses Google Gemini to:

- Automatically generate **quizzes, flashcards, and PowerPoint** presentations from the **book's lessons**.
- **Analyzes** student performance, pinpoint weak areas
- **Dynamically generates** questions to target weak areas.
- Teachers can **view, edit, monitor** generated content, and **student score** and **learning gaps**.
- **Chatbot** alongside student, acts as **personal teacher**.

Technologies used: Google Gemini, React, TypeScript, FastAPI, Python, MongoDB, Tesseract OCR

- **GPTube**

Allowed Interactive engagement with YouTube videos through a **GPT powered chatbot** that understood the content of the video. Used **Microsoft Azure** to integrate the GPT model, TTS and STT tools. The tool also enabled the creation of customized experiences based on Video Content:

- Generating Interactive **Mock Tests**.
- Correction and Explanation of User Answers.
- Generating **PowerPoint Presentation**.

Technologies used: Microsoft Azure, React.js, Django, Langchain, Chroma Vector Database, OpenAI Function Calling

- **Real-Time Facial Emotion Classification**

Leveraged transfer Learning Techniques as well as developing my own CNN model from scratch to develop a Real-Time Facial Emotion Classification System.

Technologies used: OpenCV, CNN, MobileNetV2, VGG, ResNet50, Data Augmentation

- **Data Visualizer with Machine Learning Training Using UI**

Data Visualizer platform integrating **Supervised Machine Learning** prediction capabilities within a user-friendly interface. Allowing user to:

- Data **Exploration, Cleaning, Transforming, Embedding, and Augmenting**.
- **Machine Learning Algorithms** for training such as **Regression, Classification, Ensemble Methods**.
- Access to model **Metrics** such as: **Accuracy, Precision, Recall, F-1 score, MSE**

Technologies used: Python, NumPy/Pandas, scikit-learn, Matplotlib

SKILLS

Programming Languages: Python, C#, HTML, CSS, JavaScript, TypeScript

Tools: Azure, Azure AI Foundry, Watsonx, Git, Django, Tensorflow, Keras, scikit-learn, OpenCV, React, TailwindCSS, PowerBI, Unity

Soft Skills: Agile Manifesto, Kanban Boards, Data Driven Decision Making, Data Analysis, Sales Skills

COURSES

AI-102T00-A: Designing and Implementing a Microsoft Azure AI Solution	<i>/ Microsoft</i>	<i>Feb. 2025</i>
AI-900T00-A: Microsoft Azure AI Fundamentals	<i>/ Microsoft</i>	<i>Feb. 2025</i>
AZ-900T00-A: Microsoft Azure Fundamentals	<i>/ Microsoft</i>	<i>Feb. 2025</i>
Practitioner Watsonx Assistant	<i>/ IBM</i>	<i>Feb. 2025</i>
Watsonx Orchestrate Intermediate	<i>/ IBM</i>	<i>Feb. 2025</i>
Linux Administration	<i>/ New Horizons</i>	<i>Jul. 2023</i>
Security +	<i>/ CompTIA</i>	<i>Apr. 2023</i>
Cloud AWS Practitioner	<i>/ Amazon</i>	<i>Oct. 2022</i>
Supervised Machine Learning	<i>/ DeepLearning.AI</i>	<i>Aug. 2022</i>
Network +	<i>/ CompTIA</i>	<i>Aug. 2022</i>
CompTIA A+	<i>/ CompTIA</i>	<i>Aug. 2022</i>