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.

- 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.

XR Developer Intern, *GMind*   *Jul. 2023 - Oct. 2023*

- 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

- **Winner at the GenAI Hackathon**, hosted by Stakpak, for presenting the AI-powered Language Learning App shown under the Projects Section. Link to Post 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

- **Language Learning Application**
  A full-stack language learning platform integrating AI to personalize vocabulary building and reading comprehension. Features include:

  o **Word Bank system** powered by AI to automatically populate, categorize, and assign 5-level mastery scores based on user progress and study patterns.

  o AI-driven **chatbot assistant** for real-time word extraction, grammar support, and personalized learning recommendations.

  o Immersive **Reading Mode** with contextual word lookup and real-time comprehension tracking.

  o Dynamic **Story Library** that generates custom stories using words from the user's Word Bank, tailored to their vocabulary level.

  o **Spaced repetition flashcards**, gamified quizzes, and a daily streak system to reinforce learning and boost engagement.

  Technologies used: Django REST Framework, Next.js, React, TypeScript, TailwindCSS, Google Gemini, SQLite

- **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:

  o Generating Interactive **Mock Tests**.

  o Correction and Explanation of User Answers.

  o Generating **PowerPoint Presentation**.

  Technologies used: Microsoft Azure, React.js, Django, Langchain, Chroma Vector Database, OpenAI Function Calling
  GitHub: github.com/Gallillio/GPTube

- **Real-Time Facial Emotion Classification**
  Leveraged transfer learning techniques as well as developing my own CNN model from scratch to build a real-time facial emotion classification system.
  Technologies used: OpenCV, CNN, MobileNetV2, VGG, ResNet50, Data Augmentation
  GitHub: github.com/Gallillio/RealTime_Facial_Emotion_Classification

- **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:

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

  Technologies used: Python, NumPy/Pandas, scikit-learn, Matplotlib
  GitHub: github.com/Gallillio/Data_Science-Data_Visualizer_Tool

SKILLS

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

Tools: Microsoft Azure, Watson Cloud, Google Cloud, Git, Django, Tensorflow, Keras, scikit-learn, OpenCV, ReactJS, NextJS, TailwindCSS, PowerBI, Unity

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

CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate / Link To Certification   *Issued Apr. 2025*

COURSES

AI-102T00-A: Designing and Implementing a Microsoft Azure AI Solution / *Microsoft*   *Feb. 2025*

AI-900T00-A: Microsoft Azure AI Fundamentals / *Microsoft*   *Feb. 2025*

AZ-900T00-A: Microsoft Azure Fundamentals / *Microsoft*   *Feb. 2025*

Practitioner Watsonx Assistant / *IBM*   *Feb. 2025*

Watsonx Orchestrate Intermediate / *IBM*   *Feb. 2025*

Linux Adminstration / *New Horizons*   *Jul. 2023*

Security + / *CompTIA*   *Apr. 2023*

Cloud AWS Practitioner / *Amazon*   *Oct. 2022*

Supervised Machine Learning / *DeepLearning.AI*   *Aug. 2022*

Network + / *CompTIA*   *Aug. 2022*

CompTIA A+ / *CompTIA*   *Aug. 2022*