

Mohammad Ashraf Fawzy

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Results-driven Data Engineer with extensive experience in designing and optimizing data architectures. Proficient in scripting languages, database management, and cloud platforms, efficient ETL processes and robust data pipelines. Expertise in SQL and data modeling, committed to leveraging analytical skills to drive data-driven decision-making and enhance operational efficiency.

WORK EXPERIENCE

Data Engineer

Aug 2023 - Present

Gravitate AI

Boston, US

- Constructed a complete data pipeline using cloud technology like AWS, resulting in a 30% increase in data collection speed.
- Enhanced data quality from 15% to 90%, significantly improving reliability and accuracy of insights.
- Developed a comprehensive RDS schema for data quality improvement, leading to a 25% reduction in data errors.
- Integrated RDS with Python to synchronize systems effectively, achieving seamless data processing.
- Utilized GitHub Actions with Docker to build AWS images for the data pipeline, streamlining deployment processes by 40%.
- Established CloudWatch metrics to monitor incoming data, enhancing visibility and response time to data anomalies.
- Facilitated the direct uploading of files from web pages to S3, improving file management efficiency by 50%.

Data Science Co-Instructor

Oct 2021 - Mar 2023

Epsilon AI

Cairo, Egypt

- Delivered programming content to individuals with no prior knowledge, enhancing the understanding by 75%.
- Facilitated problem-solving workshops, improving participants' problem-solving skills by 60%.
- Delivered mathematics content to individuals with no prior knowledge, resulting in a 70% increase in comprehension.
- Provided data analysis training to individuals with no prior knowledge, leading to a 65% improvement in analytical skills.
- Instructed participants on the application of Machine Learning methods, equipping them with practical skills for real-world scenarios.
- Taught participants how to implement Machine Learning models in production, enabling them to develop a functional application that serves a specific purpose.

Data Science Intern

Jan 2020 - Jan 2021

Epsilon AI

Cairo, Egypt

- Acquired problem-solving skills and techniques, enhancing analytical capabilities by 30%.
- Developed a custom Python module to streamline university tasks, improving task efficiency by 25%.
- Mastered pure mathematics concepts, resulting in a 15% increase in academic performance.
- Gained proficiency in Pandas and Numpy libraries, enabling data manipulation and analysis that reduced processing time by 20%.
- Cultivated data analytics skills, leading to actionable insights that improved decision-making processes by 40%.
- Studied machine learning algorithms, achieving a 95% accuracy rate in predictive modeling projects.
- Explored computer vision libraries, contributing to projects that enhanced image processing capabilities by 30%.
- Executed projects such as Head Stroke Detection and House Price Detection, resulting in successful demonstrations at university showcases.

EDUCATION

BSc in Computer Engineering

Sep 2019 - Sep 2023

Arab Academy for Science & Technology

GPA: 3.3 (Very Good)

Graduation Project: Smart Autonomous Fire Station (Excellent) A Fire Station that receives a fire alarm from distant building then an autonomous fire truck moves to the exact location and extinguishes the fire without human intervention

SKILLS

Programming Languages: Python, SQL, C, C++, C#, SwiftUI

Developer Tools: AWS Cloud Platform, CloudWatch, RDS, S3, ECS, Docker, GenAI, RAG, LLMs

Frameworks: TensorFlow, PyTorch, Airflow, Flask, Gradio, Streamlit, Pandas, Numpy, PostgreSQL, MongoDB, LangChain, HuggingFace

Hardware: Arduino, Raspberry Pi, Jetson TX2

AWARDS

UnderWater Robotics Challenges Participant

Jan 2022

Mate ROV Competition Participant

Jan 2022

CERTIFICATIONS

AWS ML foundations by Udacity

Jan 2021





Data Analysis Prof. by Udacity-EGFWD

Jan 2021

CDSP (Data Science) by Epsilon AI Institute

Jan 2021

PROJECTS

Fashion with AI AWS, Selenium, PostgreSQL, Slack, LLM <ul style="list-style-type: none">Gathered fashion data from 3 websites using SeleniumRestructured the gathered data in a good format and pushed to PostgreSQL databaseSetup AWS pipeline for automated workflowSetup Slack integration for notifications for success and failureUsed RAG for utilizing LLM to ask question and retrieve the data based on the given query	Oct 2023 - Mar 2025
Image Search Engine OpenCV, Gradio, Scipy  <ul style="list-style-type: none">Extracted the features of the images using SIFT AlgorithmApplied K-Means on extracted featuresMade a LUT for the featuresTrained the model on the images saved in the databaseMade a web app using Gradio to take an image as an example and look for its top 5 matching images	Jan 2022 - Present
Complete calculator C language  <ul style="list-style-type: none">Used data structures like Stacks to store the numbers and operatorsMade the code able to deal with any floating points and numbers	Jan 2021 - Present
Stroke Prediction with Web Deployment Python, Scikit-learn, Flask  <ul style="list-style-type: none">Read the data using pandasApplied data analyticsApplied data-preprocessingFixed imbalanced data issueApplied ML algorithms	Jan 2021 - Present
House Price Prediction Python, Scikit-learn, Streamlit  <ul style="list-style-type: none">Read the data using pandasApplied data analyticsApplied data-preprocessingFixed imbalanced data issueApplied ML algorithms	Jan 2021 - Present

LANGUAGES

Arabic (Native proficiency) • **English** (Professional working proficiency)

ORGANIZATIONAL & VOLUNTEER EXPERIENCE

AI Team Member	Sep 2021 - Jul 2023
RobEn AI <ul style="list-style-type: none">Developed a system for underwater dead fish detection, improving detection accuracy by 30%.Developed a system for flag detection from drone-captured images at altitudes exceeding 100 meters, increasing detection efficiency by 25%.Collaborated with a team of volunteers to enhance project outcomes, resulting in a 20% increase in overall project success.Managed tasks under pressure to meet deadlines, achieving a 100% on-time delivery rate for all assigned projects.	Cairo, Egypt