

# Abdulrahman Taghyan

Machine Learning Engineer

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## SUMMARY

AI Engineer specializing in machine learning, deep learning, and large-scale AI systems. Proficient in Python, PyTorch, TensorFlow, and deploying AI models into production. Skilled in NLP, computer vision, LLMs, and building scalable, data-driven AI solutions. Passionate about responsible AI, continuous learning, and impactful innovation.

## EXPERIENCE

### Machine Learning Intern

10/2024 – 05/2025

DEPI (Digital Egypt Pioneers Initiative)

Cairo, Egypt

Built and trained machine learning and deep learning models for real-world use cases.

Developed preprocessing pipelines for structured and unstructured datasets.

Implemented classification, regression, and NLP models using Python and industry-standard libraries.

Improved model accuracy through hyperparameter tuning, feature engineering, and evaluation techniques.

Collaborated with cross-functional teams to deliver high-quality AI solutions.

## TECHNICAL SKILLS

### Machine Learning & AI

Supervised & Unsupervised Learning, Deep Learning, Neural Networks, Computer Vision, NLP, Model Evaluation,

### Databases & Tools

SQL, PostgreSQL, MongoDB, SQLite, MySQL, Excel, Power BI, Tableau, Google Colab, Jupyter Notebook.

### Languages & Libraries

C++, C#, Python, R, NumPy, Pandas, Scikit-learn, TensorFlow, Keras, PyTorch, Matplotlib, Seaborn, OpenCV, NLTK, Hugging Face.

### MLOps & Deployment

Git, GitHub, Docker, FastAPI, Flask, Streamlit, MLflow, CI/CD, Model Deployment, RESTful APIs, Agile, Scrum.

### Soft Skills

Problem-Solving, Critical Thinking, Team Collaboration, Communication, Analytical Thinking, Adaptability, Attention To Detail, Creativity, Leadership, Time Management, Research Ability, Mentoring

## EDUCATION

### Bachelor's Degree in Computer Science

10/2021 – 07/2025

Shorouk academy

Cairo, Egypt

## PROJECTS

### Mental health chatbot

Developed an intelligent mental health support chatbot using the Google Gemini API, LangGraph, and advanced NLP techniques. The chatbot provides a safe, non-judgmental space for users to share their thoughts while receiving empathetic and context-aware responses. Leveraged the Google Gemini API for nuanced language understanding, emotional cue detection, and dynamic response generation. Used LangGraph to manage conversation flow and ensure coherent, context-sensitive interactions. Designed to maintain privacy and confidentiality, the chatbot can detect high-risk situations and guide users toward appropriate mental health resources. Demonstrates the potential of AI to offer scalable emotional support in a safe, ethical way.

**Graduation Project (RX-AI)**

Developed an AI-powered system for drug compatibility and intelligent search, aimed at improving pharmaceutical decision-making and drug information accessibility. Built a tool that calculates drug compatibility scores based on prescription details (composition, strength, use cases), performs semantic search for related drugs, and suggests alternative medications. Implemented using Python, Pandas, Sentence Transformers (ClinicalBERT, DistilBERT), FAISS, Scikit-learn, and FastAPI. Achieved strong performance in clustering, retrieval, and semantic matching tasks.

**CERTIFICATES**

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**Database - ITI (Mahara-Tech)** 

Training in database design, SQL, relational modeling, and optimized query writing.

**Python Essentials 1 - CISCO** 

Learned Python fundamentals and completed hands-on coding exercises.

**Mathematics - 365 Data Science** 

Covered linear algebra, calculus, probability, and statistics for ML applications.

**Prompt Engineering - IBM** 

Learned prompt crafting, optimization techniques, and real-world prompt engineering workflows.

**Git and GitHub - Coursera** 

Experience with version control, branches, pull requests, and collaborative workflows.

**Networking - CISCO** 

Gained foundational knowledge of IP addressing, routing, switching, and network protocols.

**Agile Development and Scrum - Coursera** 

Learned Agile and Scrum fundamentals including user stories, sprints, and iterative development.

**Software Engineering - Coursera** 

Studied SDLC, software architecture, design patterns, and core programming concepts.

**LANGUAGES**

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**Arabic**

Native

**English**

Fluent