

Mohamed Badry

Machine Learning Engineer & Data Scientist

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PROFILE

Machine Learning Engineer and Data Scientist with hands-on experience designing, training, and deploying scalable ML models that deliver >90% accuracy across diverse domains. Proficient in end-to-end ML pipelines—from data ingestion and feature engineering to model deployment on AWS and performance monitoring via dashboards.

Skilled in Python, SQL, Scikit-learn, TensorFlow, PyTorch, and MLOps tools (MLflow, SageMaker). Proven ability to translate business problems into data solutions, automate workflows (40% efficiency gain), and lead technical teams. Passionate about building reproducible, production-grade AI systems that drive measurable impact.

EXPERIENCE

AWS Machine Learning Engineer Trainee Digital Egypt Pioneers Program (DEPI) – Ministry of Communications and Information Technology (MCIT) - On-site, Cairo, Egypt	Nov 2024 - May 2025
Technologies: AWS SageMaker, TensorFlow, PyTorch, Power BI, Python	
<ul style="list-style-type: none">Built and deployed end-to-end ML pipelines on AWS SageMaker, achieving 95%+ model accuracyImproved model generalization by 20% through hyperparameter tuning and regularizationCreated interactive dashboards for real-time model performance monitoring using Power BI	
Lead, Data Science & Machine Learning Team Cisco Networking Student Club - Volunteer, Cairo, Egypt	Sep 2023 - Jun 2024
Technologies: Python, Scikit-learn, Flask, Git	
<ul style="list-style-type: none">Mentored 25+ students in Python, EDA, and machine learning model developmentLed team that improved project accuracy by 30% over baseline modelsOrganized 4+ AI training programs focused on deployment and visualization	
Machine Learning Intern Instant Software Solutions - On-site, Cairo, Egypt	Jul 2023 - Apr 2024
Technologies: Python, XGBoost, Power BI, SQL, Pandas	
<ul style="list-style-type: none">Conducted EDA and feature engineering on datasets exceeding 100K recordsBuilt supervised learning models achieving up to 94% accuracyAutomated data preprocessing pipelines, reducing manual work by 40%	

PROJECTS

<u>PathCoder – Career Path Recommender</u>	Sep 2023 - May 2024
An AI-powered web app that helps developers explore career paths, predict suitable jobs, and discover skills they need to grow.	
Technologies: Python, Scikit-learn, TensorFlow, Flask, Streamlit, MySQL, Firebase, MLflow	
<ul style="list-style-type: none">Trained a Random Forest model on 200K+ developer profiles (Stack Overflow Survey) achieving 92% prediction accuracy with SHAP explainability.Built full-stack app using Flask backend and Streamlit frontend with Firebase Auth and MySQL storage.	

- Implemented MLflow for experiment tracking, improving reproducibility by 40%.
- Added NLP chatbot and TensorFlow-based emotion detection as experimental features to enrich UX.

KPIs Data Analysis & Prediction System

Oct 2023 - Jan 2024

A predictive analytics system to forecast key performance indicators with high accuracy for business decision support.

Technologies: Python, Pandas, Scikit-learn, XGBoost, Matplotlib, Seaborn

- Processed and analyzed 70K+ KPI records to build classification models achieving 98% test accuracy.
- Reduced overfitting by 15% using cross-validation and advanced feature engineering techniques.
- Delivered interactive Power BI dashboards for real-time KPI monitoring and trend forecasting.

Flight Price Prediction

Feb 2023 - Apr 2023

A regression-based system to predict flight prices and uncover demand patterns using historical booking data.

Technologies: Python, Pandas, Seaborn, Scikit-learn, XGBoost

- Analyzed 30K+ flight records to identify pricing trends across airlines, routes, and seasons.
- Built XGBoost regression model that reduced RMSE by 25% compared to baseline linear models.
- Optimized data preprocessing pipeline, cutting computation time by 30% for faster iteration.

EDUCATION

B.Sc. in Data Science (Arab Open University)

Sep 2021 - Jun 2025

GPA: 3.03

CERTIFICATION

AI & Data Science – AWS Machine Learning Engineer Training

Nov 2024 - May 2025

Digital Egypt Pioneers Program (DEPI) – MCIT

- Technologies: AWS SageMaker, EC2, Lambda, TensorFlow, PyTorch, Power BI
- Concepts: ML Pipelines, Hyperparameter Tuning, Model Deployment, Performance Monitoring

SKILLS

Programming Languages: Python, SQL, R

Machine Learning & AI: Scikit-learn, XGBoost, LightGBM, CatBoost, TensorFlow, PyTorch, AutoML, PyCaret

Data Visualization: Excel, Power BI, Tableau, Matplotlib, Seaborn, Plotly

Cloud & Deployment: AWS (SageMaker, EC2, Lambda), Flask, FastAPI, MLflow

Databases: MySQL, Firebase

Core Concepts: Feature Engineering, Exploratory Data Analysis (EDA), Model Optimization, Cross-Validation, Statistical Inference

LANGUAGES

Arabic (Native), English (Very Good)