Mohamed Elshoraky

Machine Learning Engineer

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⭘ GitHub   kaggle Kaggle

PROFILE

I'm a Computer Engineering student passionate about AI and machine learning. I enjoy solving practical problems and quickly learning new skills to grow in data science and related engineering fields.

EDUCATION

Bachelor of Computer Engineering   10/2022 – present
Kafr El-Sheikh University   Kafr El-Sheikh, Egypt
CGPA: 3.87 / 4.00

EXPERIENCE

Machine Learning Intern   06/2024 – 12/2024
Digital Egypt Pioneers Initiative (DEPI)   Kafr El-Sheikh, Egypt

- Applied ML techniques (SVM, decision trees, neural networks) and performed data preprocessing and EDA on real-world datasets.
- Built deep learning models (GANs, GRUs, LSTMs) and utilized transfer learning with pre-trained models like BERT for NLP tasks.
- Experienced in leveraging MLflow for model tracking and deployment.
- Improved soft skills (teamwork, leadership, communication) and gained freelancing insights.

Entrepreneurship Program Participant   01/2024
Innovegypt Program, ITIDA   Kafr El-Sheikh, Egypt

- Completed 45-hour expert-led training on startup development: idea generation, prototyping, lean techniques.
- Developed and pitched a startup project; gained hands-on experience in problem-solving and business modeling.
- Collaborated in teams to brainstorm and refine innovative solutions, enhancing teamwork and communication.
- Acquired financial literacy, and marketing strategies from professionals.
- Learned to navigate the startup ecosystem, leveraging resources for growth.

PROJECTS

Mano Basic Computer Implementation 🔗
- Implemented full Mano Basic Computer architecture with instruction set, memory, I/O, and control units.
- Designed and simulated digital circuit in Proteus using selected ICs and custom timing delays.
- Developed synthesizable Verilog code for registers, ALU, control logic, and bus system.
- Verified instruction execution and interrupt handling via extensive simulation and test programs.

Real-Time Health Monitoring & Prediction System (IoT & ML) 🔗
- Collected real-time ECG, heart rate, SpO_2, and temperature data using ESP32 and biomedical sensors.
- Trained a PyTorch DNN achieving 97% accuracy in predicting health status from sensor data.
- Deployed the model via Flask, integrated with Firebase for real-time data input.
- Automated end-to-end pipeline from sensor data to live health predictions.
- Built a UI to display real-time vitals and ML-based health status.

Sentiment Analysis Tool 🔗
- Conducted data preprocessing, feature engineering, and exploratory data analysis (EDA) on text datasets.
- Built and evaluated multiple machine learning models (decision trees, SVM) and deep learning architectures (LSTM).
- Achieved the highest accuracy using the BERT model, leveraging transfer learning for optimal performance.
- Tracked and managed model performance using MLflow for reproducibility and scalability.
- Deployed the model using Flask and developed a user-friendly UI for seamless interaction

Yallakora Match Data Scraper 🔗
- Built a Python-based web scraping tool using BeautifulSoup to extract football match data from Yallakora.
- Enabled date-specific scraping to fetch match details like teams, times, and scores.
- Exported data to CSV for easy storage and analysis.
- Leveraged libraries like requests, BeautifulSoup, and csv for efficient scraping and data handling.

Life Expectancy Prediction 🔗
- Preprocessed WHO Life Expectancy dataset, handling missing values and encoding features.
- Developed and trained Linear Regression (scikit-learn) and Neural Network (PyTorch) models.
- Evaluated models using MSE and visualized predictions for actionable insights.

Telco Customer Churn Prediction 🔗
- Analyzed telecom customer data to identify churn patterns through exploratory data analysis (EDA) and feature engineering.
- Built and evaluated machine learning models (KNN, Random Forest, Logistic Regression) and neural networks (TensorFlow, PyTorch).
- Delivered actionable insights to improve customer retention strategies and reduce churn rates.

Shaghalni - شغلني
- Proposed a startup solving job access for programmers and engineers through an app
- Conducted comprehensive project planning, including BMC, personas, empathy maps, and prototypes, and presented a detailed roadmap for development, scalability, and user engagement strategies.
- Planned a 24-month roadmap for app development, course/job expansion, and profitability.

Portfolio Website 🔗
- Developed a modern, responsive personal portfolio website using HTML, CSS, and JavaScript.
- Implemented smooth scrolling navigation, video background, and a mobile-friendly hamburger menu.
- Displayed skills, services, and projects with visual elements like progress bars and icons.
- Integrated contact information, social media links, and a downloadable resume for easy accessibility

SKILLS

AI & Data Science

• Machine Learning	• Deep Learning	• Data Preparation	• Data Visualization

Python

• Basics	• NumPy	• Pandas	• Scikit-Learn
• PyTorch	• MatPlotLib	• Seaborn	• BeautifulSoup

Web Scraping

MLOps

• Git & GitHub	• MLflow	• Flask	• Azure

Hardware Engineering

• VHDL	• Verilog	• µP Architecture	• Arduino

Software Fundamentals

• C++ Basics	• Data Structures	• Algorithms	• problem Solving
• OOP	• Assembly		

Databases

• Database Fundamentals	• SQL

Web Development

• HTML	• CSS	• JS

Beyond the Code

• Time Management	• Team Collaboration	• Hard Working	• Responsibility

LANGUAGES

Arabic ● ● ● ● ●
Native

English ● ● ● ○ ○
Intermediate