# FADY N. MOFEED

Machine Learning Engineer

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#### **SUMMARY**

Driven and analytical Computer Engineering student in my fourth year at Assiut University, with a foundational STEM education background and a focus on machine learning and AI. Skilled in Python, NumPy, Pandas, and Scikit-Learn, with hands-on experience in data processing, visualization, and machine learning principles. Known for strong analytical and problem-solving abilities, I am adept at preparing and optimizing models, conducting data analysis, and effectively documenting results. Excited to apply my technical knowledge and passion for AI in a dynamic environment, eager to learn from industry professionals while contributing to impactful AI projects.

#### **EXPERINCE**

#### DIGITAL EGYPT PIONEERS INTIATIAVE (DEPI)

Assiut, Egypt

Machine Learning / Intern

Jun 2024 – Nov 2024

My journey in Microsoft ML Engineer track (in DEPI) equipped me with specialized machine learning expertise and advanced freelancing skills, enabling me to excel in today's digital and competitive marketplace.

#### **Graduation Project**

• Brain Tumor Classification: VGG16 & Augmented MRI | <u>Link</u>
Engineered a brain tumor detection app utilizing 253 MRI brain images. Training the VGG16 model for 30 epochs with a batch size of 20, I achieved a 98.34% accuracy by fine-tuning only the 'block5\_conv1' layer.

ISCHOOL Cairo, Egypt

Machine Learning instructor/ part-time

Jun 2024 - Oct 2024

As a coding instructor with the DEMI project at iSchool, I taught Python programming, Machine learning, and AI to over 1000 students across Egypt.

- Guided students in building foundational projects and strengthening their coding through Python.
- Focused on advanced Python, Supervised Learning basics, and with Teachable Machine Web.
- Created projects addressing SDGs, including Deep Learning simulating the impact of waste on marine life.

## PLASMENT DOST

Bagalur, India

Machine Learning / Intern

May 2024 – Jun 2024

**D**uring Placement internship, I developed data solutions for a dataset on Kaggle, optimized five machine learning models in (Computer Vision – Tabular Data), and worked in a team-work environment to drive growth.

#### Selected Projects

- Exploring Regression Models with UMAP and Ridge | <u>Link</u>
   Analyzed data from 1460 monthly active users and used their house price responses to guide marketing and predict the house price; used root mean square error as the model performance matrix and decreased it to 0.22.
- CNN: Early Stopping, Data Augmentation, and Visualizations | <u>Link</u>
   Reviewed 28,000 dataset images to train a CNN for digit recognition, achieving a 99.1% accuracy score and ranking 400 globally.
- Optimizing XGBoost for Fraud Detection with Optuna | <u>Link</u>
  Analyzed 218,000 bank user responses to create a credit card fraud detection system. Identified 7 key features from unnamed data, enhancing model accuracy to detect fraud, achieving an AUC score of 0.83878.

## INFORMATION TECHNOLOGY INDUSTRY DEVELOPMENT AGENCY (ITIDA)

Assiut, Egypt

Machine Learning / Intern

Aug 2023 – Nov 2023

- Built and fine-tuned machine learning models, including XGBoost, support vector machines, and random forests, to optimize predictive accuracy. Implemented hyper-parameter tuning using RandomizedSearchCV.
- Processed raw data by handling missing values, outliers, and inconsistencies to ensure data quality and conducted exploratory data analysis (EDA) to uncover trends, patterns, and insights.
- Identified and extracted key features from large datasets to improve model performance. Utilized advanced techniques such as feature scaling, normalization, and dimensionality reduction.
- Participated in daily stand-ups and sprint planning sessions as part of an Agile team. Contributed to code reviews and collaborative problem-solving sessions.

## **EDUCATION**

ASSIUT UNIVERSITY Assiut, Egypt

Bachelor of Engineering, Major in Computer Science

Oct 2020 - Jul 2025

Related Courses: Data Structures, Algorithms, Computer Architecture, AI, OOP, Computer Vision, Machine Learning.

ASSIUT STEM SCHOOL

Assiut, Egypt

High School Sep 2017 – Jul 2020

Related Courses: Statistics, probability, Linear Algebra, Mathematics.

GPA: 3.6/4.0; Dean's List 2019-2020

## **SKILLS SUMMARY**

**Platforms**: Jupyter Notebook, Google Colab, Kaggle.

**Languages**: Python, C++, SQL.

Tools: MySQL, Power BI, Excel, PowerPoint.

Frameworks: Pandas, Numpy, Matplotlib, seaborn, Keras, TensorFlow, Scikit-Learn, OpenCv, ONNX.

Technical Skills: Data Modeling, Data science, Deep Learning, Image Processing, Azure, MlOps, Data visualization

Techniques, Machine Learning Algorithms, AWS.

Soft Skills: Collaboration skills, Mentorship, Time Management, Excellent communication, Presentation and

Reporting skills, Data Gathering, Innovation, flexible, Work independently.

# **LANGUAGES**

Fluent in Arabic; Conversational proficiency in English