Marwa Fawzy Qabeel

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Professional Summary

ML Engineer / Data Scientist (Georgia Tech M.S. in Computer Science) specializing in Machine Learning. Delivered 4.8/5 CSAT across 100+ Udacity sessions/webinars and built and evaluated end-to-end ML pipelines (Python, PyTorch, scikit-learn). I am interested in production ML, MLOps, and A/B testing.

Technical Skills

Machine Learning & Deep Learning: TensorFlow, PyTorch, scikit-learn, BERT, GPT-2, CNNs, RNNs, YOLO, Single-Shot Detection (SSD)

Programming & Scripting: Python (NumPy, Pandas, Flask), R, JavaScript

Algorithms & Data Structures: Strong foundation through coursework (Data Structures and Algorithms, Graph Theory) and hands-on projects

Data Pipelines & Production Systems: Experience in developing ML pipelines, model training, candidate extraction, and integration

Computer Vision: Image Processing, Feature Extraction, Object Detection & Tracking, Region-based CNN (R-CNN), Advanced Object Localization

Data Analysis & Visualization: Power BI, Tableau, Matplotlib, Advanced Excel, SQL (MySQL, PostgreSQL)

Cloud & Deployment: AWS, Azure, Google Cloud, Flask, Docker

Data Handling: NoSQL (MongoDB), Spreadsheets

Development Tools: Git/GitHub, VS Code, PyCharm

Specialized Areas: Time-Series Analysis, Statistical Analysis, Fairness-Aware Machine Learning, advanced feature engineering

Work Experience

Independent Consultant for Data Science – Udacity, Remote

January 2019 – Present

Reviewed projects across Data Analyst & Business Analytics; average turnaround **<24h**; learner CSAT **4.8/5**.

Onboarded new mentors; authored rubric clarifications; contributed to content updates that lifted pass rate.

Led **100+** live webinars and 1:1 calls; created reusable feedback templates cutting review time **~30%**.

Data Science Intern – Mozilla/Firefox, Remote

September 2019 – March 2020

Assisted in building a **retention propensity prototype** (Python/SQL on **BigQuery**); engineered **~5 new features**, ran offline evaluation, and documented findings.

Built **cohort-retention queries** and a lightweight dashboard (BigQuery + Data Studio/Tableau) that made PM self-serve analysis faster.

Partnered with DS/PM to define **success metrics** and contribute to weekly experiment readouts.

Education

Georgia Institute of Technology – Atlanta, GA, USA

Master of Science in Computer Science (January 2021 – Expected: April 2026)

South Valley University – Qena, Egypt

Bachelor of Science in Biology (September 2005 – July 2010)

Projects

Amazon Q in QuickSight – KPI Dashboard (September 2025)

Configured Q on sample data, created topics and Q Bar queries, built a KPI dashboard, and refined responses using feedback to communicate insights succinctly.

Fairness-Aware Educational Data Mining Project

August 2024 – January 2025

Developed adversarial machine learning models to enhance fairness in educational analytics, increasing model equity by 15% without compromising accuracy. Improved feature engineering and fairness metrics, optimizing predictions for resource allocation among diverse student demographics.

Detecting Fake News using Deep Neural Networks

May 2023 – August 2023 (Python, TensorFlow, PyTorch, scikit-learn)

Achieved 99.5% accuracy in detecting fake news using BERT and GPT-2 models. I led a comparative analysis of RNNs and LSTMs to optimize model performance.

Time-Series Analysis of Geographic Depression Scores on Twitter

January 2023 – April 2023 (Python, PyTorch, Tableau)

Developed a BERT-based model to analyze mental health patterns from Twitter data, providing insights into regional trends. Visualized data using Tableau to support healthcare professionals in identifying and addressing mental health challenges.

Disease Detection using Chest X-ray Database

August 2019 (Python, PyTorch)

Built a deep learning model using the ChestX-ray8 dataset to improve diagnostic accuracy for lung diseases. Enhanced object detection capabilities through CNN and localization techniques.

Certifications & Achievements

Coursera Specializations (UC San Diego): Data Structures & Algorithms (Aug 2024); Discrete Mathematics for CS (Mar 2024).

UC San Diego Extension (Online, Jun–Sep 2020): Data Structures & Algorithms in Java; Discrete Mathematics.

Charter Oak State College (Online, Mar 2020): Introduction to Computer Science and Programming with Python.

Udacity Nanodegrees: Data Structures & Algorithms; Deep Learning; Computer Vision; Data Analyst; Intro to Self-Driving Cars.

Languages

English: Professional proficiency

Arabic: Native proficiency