

Mohamed Nishan

AI/ML ENGINEER

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Portfolio: mohamednishan.github.io/Mohamed-Nishan-Portfolio/

Objective

AI Engineer passionate about developing scalable ML systems and real-time data solutions to enhance business decision-making and drive intelligent automation.

Education

University of Hertfordshire, BSc Computer Science

September 2021 – June 2025

- Major: Artificial Intelligence, GPA 3.81/4.5
- Honours Classification: First Class Honours

EL Bashair International school, IGCSE

September 2019 - July 2022

Technical Skills

- Languages: Python, Java, C/C++, PHP, SQL
- ML/DL: TensorFlow, PyTorch, scikit-learn, Pandas
- Web Dev: Flask, HTML, CSS, JavaScript
- Tools: Git, Jupyter, MySQL
- ML Tasks: Data cleaning, feature engineering, model training & evaluation, deployment

Projects

Automated Inventory & Recommendation System – Graduation Project

- Developed a **real-time inventory management system** using **ESP32**, **RFID/NFC**, and a **Flask API**, integrated with a **MySQL database** for full CRUD operations.
- Built a **secure, responsive web interface** (HTML, CSS, JavaScript) with **role-based access** and **Agile, component-based** development for scalability.
- Trained a **TensorFlow MLP model** achieving **98% accuracy** in product demand prediction using engineered features from **1,000+ sales** and **499 products**.
- Delivered **dynamic product recommendations** and validated performance through **real-world testing**, earning high **usability and impact** ratings.

Intelligent Adaptive System for Virtual Home Environment Management

- Developed a hybrid intelligent control system combining rule-based logic and LSTM neural networks to regulate temperature, humidity, and CO₂ levels.
- Achieved 20.7% lower MAE in temperature forecasting using LSTM vs. SimpleRNN, with MAE = 2.78 and RMSE = 4.16 for comfort prediction.
- Built a modular Python architecture (OOP) managing sensors, actuators, and real-time data integration with CSV-based inputs and LSTM-driven control.
- Implemented energy-efficient logic for heating and ventilation, plus timestamped logging for traceability and performance evaluation.

AUTOMATED ORGANIZATIONAL CHART GENERATOR

- Developed a web tool using HTML, CSS, Flask, and Python to dynamically generate organizational charts from Excel files.
- Implemented features for file upload, real-time data processing, and downloadable chart outputs.
- Designed a simple, user-friendly interface to enhance usability.
- Seamlessly integrated front-end and back-end components for smooth performance.

FRAUD DETECTION SYSTEM

- Developed a **fraud detection system** analyzing transaction data (amount, merchant, location, timestamp, and cardholder details).
- Built **data preprocessing pipelines** ensuring accuracy and consistency across inputs.
- Applied **rule-based, statistical, and ML models** (Isolation Forest, Autoencoder, SVM) for anomaly detection.
- Designed a **scoring and alert mechanism** enabling real-time monitoring, automated responses, and fraud prevention.

Additional Experience

FoodTrip | ERP & IT Trainee

July 2024 - August 2024

- Manage NetSuite business cycles (O2C, P2P) with focus on efficiency and quality
- Provide IT support: laptop repairs, software installs, and network management
- Build web interfaces (HTML/CSS) and backend logic (Python, Flask)
- Skilled in problem-solving, multitasking, and teamwork

Xelerate | Technical NetSuite Intern

April 2024 - June 2024

- Completed NetSuite introduction, building a solid foundation
- Developed scripts in SuiteScript 1.0 and 2.0 to deepen understanding
- Proficient in SuiteScript syntax, features, and workflow processes

Orange | First Line Support Intern

September 2023 - September 2023

- Diagnose and resolve customer issues promptly for a positive user experience
- Manage ticketing systems to track, prioritize, and resolve inquiries efficiently
- Optimize response times and maintain high service quality

Languages

- English – Excellent
- Arabic – Native

Certifications

- Deep Learning Essentials with Keras - IBM
- Machine Learning with Python (V2)
- Oracle Cloud Infrastructure 2025 Certified AI Foundations Associate – Oracle University
- Building AI Solutions Using Advanced Algorithms and Open-Source Frameworks - IBM SkillBuild
- Introduction to Responsible AI - Google Cloud
- Introduction to Generative AI - Google Cloud

Skills & abilities

- Critical Thinking
- Handling Pressure
- Documentation or technical writing
- Leadership
- Problem Solving
- Adaptability
- Multitasking
- Time management
- Teamworking

Extracurricular activity

Visionary club – president

- University of Hertfordshire, Cairo, Egypt

- August 2024 – May 2025
- Led a team of 50

Enactus club – Media member

- University of Hertfordshire, Cairo, Egypt
- March 2022 – January 2024

Rotaract club – Media member

- University of Hertfordshire, Cairo, Egypt
- October 2024 - January 2024