GABRIEL EDWARD MARQUEZ

Data Scientist • Full-Stack Web Developer • Machine Learning Engineer

AI/DS undergraduate with hands-on experience in ML, full-stack development, and IoT systems. Built production dashboards (Next.js + Firebase), trained ML/CV models, and delivered real deployments in industry, research, and hackathons. Strong focus on applied machine learning and rapid prototyping.

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Experience

IT Student Assistant
5/2024 - Present

University of Doha for Science and Technology
Duhail, Qatar

- Assisted in lab sessions for programming, web development, and introductory data science, helping students debug code and understand core concepts.
- Guided students in Python, JavaScript, HTML/CSS, and data analysis tools.
- Collaborated with instructors to prepare lab materials and streamline technical activities.

Research Intern
7/2025 - 8/2025

Columbia University Affiliation, University of Doha for Science and Technology
Remote | Doha

- Selected for a **Columbia University–affiliated AI in Healthcare research program**, focusing on national AI implementation in Qatar.
- Studied AI adoption, readiness, and integration frameworks for medical systems using data science and ML methodologies.
- Produced evidence-based recommendations in collaboration with faculty mentors for healthcare stakeholders.

Full Stack Software Developer
2/2025 - 7/2025

Cleano Laundry
Doha, Qatar

- Led development of the **Cleano vendor dashboard**, enabling vendors to manage orders, pricing, and services; used daily by **20+ vendors**.
- Implemented real-time workflows using **Firebase (Firestore, Auth, Storage)** and built modular **Next.js** components for high responsiveness.
- Added analytics dashboards (orders, customer trends, revenue) and improved performance across devices.

Education

BASc. in Data Science and Artificial Intelligence
7/2022 - Present

University of Doha for Science and Technology | CGPA: 3.698 / 4.0
Duhail, Qatar

- Coursework: Machine Learning, Data Analysis & Visualization, Deep Learning, Distributed Computing, Data Mining
- Strong foundation in Python, Java, SQL, Statistics, and Linear Algebra

Projects

LLM Retrieval-Augmented Generation System ‹/›
11/2025

- Implemented a full **RAG pipeline** (document ingestion → embedding → vector search → LLM generation) using Python, FAISS, and open-source LLMs.
- Built a reproducible research framework with evaluation (retrieval accuracy, grounding checks) and modular components for dataset loading, chunking, embedding, and query orchestration.

Footballer FaceGAN — Attribute-Controllable Face Generator ‹/›
10/2025

- Built a compute-efficient **InfoGAN + DiffAugment** model to generate 128×128 footballer face portraits using the FM23 Cutout dataset.
- Designed a **DCGAN + InfoGAN hybrid** with spectral normalization, MI loss, and EMA stabilization; trained efficiently on an **RTX 4060**.
- Implemented **Gradio** tools for latent-space exploration (continuous codes, PCA sliders, category clusters), and produced a reproducible research report with quantitative metrics (FID/KID).

Houston Rockets Statistics Dashboard — PowerBI Analytics Project ↗
6/2024

Data Analysis & Visualization Course (Spring 2024)

- Designed an interactive **PowerBI dashboard** analyzing Houston Rockets player and positional performance (points, rebounds, assists, efficiency).
- Cleaned and modeled the dataset using PowerQuery; produced visual insights with scatterplots, KPIs, and dynamic slicers.

Hackathons

1st Place - UDST ACM Student Chapter Website Gamification Hackathon, 9/2025
- Built a gamified ACM website that boosted student engagement through point-based challenges and leaderboards, using React.js + Firebase.
- Integrated authentication and activity-tracking modules via REST APIs.
- **1st Place** among 10+ university teams for innovation and execution.

Top 15 Finalist, Second Phase Incubation - Qatar Innovation Program, 8/2025
TupperCare: Smart Food Spoilage Detection System
- Built **TupperCare**, a smart spoilage detection system using methane, air-quality, and temperature/humidity sensors; trained regression + CV models via sensor fusion.
- Engineered a modular, low-cost prototype compatible with standard Tupperware; led backend data logic and ML implementation.
- Selected as **Top 15 out of 200+** nationwide teams and advanced to the MVP incubation phase.

Second Phase Finalist - National Planning Council Datathon, 2/2025
GreenHealth AI: AI-Driven Urban Health & Sustainability Platform
- Built an AI-driven platform that analyzes air-quality and urban-heat indicators to support environmental health monitoring and sustainability planning.
- Integrated real-time data pipelines and delivered dashboards aligned with Qatar's National Data & Statistics Strategy.
- Finalist at the National Planning Council Datathon and presented insights to government stakeholders.

5th Place Overall - Carnegie-Mellon University-Qatar Lifelines Hackathon, 2/2025
Wrist Assured by SmartBand: Wearable for Emergency Response Systems
- Built **Wrist Assured**, an AI-assisted emergency wearable with real-time GPS tracking, vital-signal monitoring, and visual/auditory alerts.
- Integrated IoT hardware (GPS module, LED, buzzer) with a mobile app using the Google Maps API for live location updates.
- Achieved **Top 5/93** nationally for innovation in health and safety tech.

Skills

Languages
Python • Java • JavaScript • SQL

ML/AI
PyTorch • Scikit-learn • Optuna • Pandas • NumPy

Data & Business Intelligence
PowerBI • Looker

Web Development
Next.js • Firebase • MongoDB • Tailwind/ShadCN

IoT
Arduino • Sensor Integration (Gas, GPS) • MKR IoT Carrier

Tools
Git • Google Maps API • VS Code

Soft Skills
Communication • Team Collaboration • Rapid Prototyping • Leadership

Certifications

- 📄 **Google Masterclass: Looker, the next wave of BI** - Google Center of Excellence, 9/2025
- 📄 **Associate Data Analyst in SQL** - DataCamp, 5/2023
- 📄 **Data Analyst in Python** - DataCamp, 4/2023