Mohd Muhtasim Bashar

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Education

Qatar University *Doha, Qatar*
B.Sc in Computer Science (4^{th} Year) *Aug 2022 - June 2026*

- GPA: 3.90/4.0 - Vice President's List and 4-time Dean's List Student.
- **Coursework:** Programming in Python, Object Oriented Programming (Java), Data Structures, Algorithms, Fundamentals of Database (Oracle SQL), Computer Architecture, Computer Security, Software Engineering, Data Communication and Networks, Web Development, Data Science, Operating System, Artificial Intelligence & Deep learning.

Experience

S3 Lab - Software Engineering Intern *Oct 2025 – Current*
Doha, Qatar

- Developed frontend UI screens using TypeScript, React, and Next.js for CAID, an AI-powered carbon emission analytics dashboard, improving data accessibility for sustainability teams.
- Integrated backend services such as AI models, Databases with the frontend through REST APIs, enabling seamless real-time emission insights and reducing manual data handling for users.
- Containerized and deployed the web applications using Docker, enhancing system scalability and reliability for production environments.

SIEMENS - Grid Software Intern *June 2025 - July 2025*
Doha, Qatar

- Trained and deployed LSTM-based AI models using Python, on smart meter data to forecast electricity consumption patterns, improving forecasting accuracy and supporting smarter grid planning decisions.
- Built an interactive Power BI dashboard using real-time data from Meter Data Management Systems (MDMS) to enhance Kahramaa's visibility in low-voltage networks, enabling energy-saving insights and identifying potential revenue opportunities.
- Contributed to a smart monitoring solution for Msheireb, configuring Modbus, BACnet, and MQTT protocols to connect Multi-Function Meters (MFMs) to IoT gateways, enabling real-time tracking of solar panel efficiency and meter data.

Qatar University - Research Intern *May 2025 – June 2025*
Doha, Qatar

- Developed an AI-powered distraction detection system for motorcycle delivery drivers, with Computer Vision techniques and a real-time mobile alert application, which was recognized as the Best Research Project in the Information & Technology category.
- Achieved 95% accuracy in detecting rider distractions, validated on a custom data set comprising over 1,800 images of motorcyclists in various helmet and lighting conditions, by developing a CNN model using head pose estimation.
- Reduced potential distractions for drivers without sudden interruptions, as demonstrated through real-world user testing, by building a Flutter-based Android mobile app that runs passively in the background and delivers over-the-screen alerts.

Projects

AI-Powered Customer Review Analysis: NLP, Text Embeddings & Semantic Search *github.com/nlp-analysis*

- Engineered an AI-powered NLP pipeline processing 1,000 customer reviews using text embeddings and semantic search to enable automated topic categorization and similarity-based recommendations for business applications.
- Built semantic search function retrieving top-3 similar reviews using vector similarity metrics, improving customer service response personalization.
- Applied dimensionality reduction (t-SNE) to visualize embedding clusters, uncovering distinct customer sentiment patterns across product categories.

Automated Medical Transcription Organizer with LLM Integration *github.com/llm-transc*

- Developed Python-based LLM integration using OpenAI API calls to parse complex medical terminology and extract key clinical variables (age, specialty, treatments), outputting structured data in pandas DataFrames.
- Applied prompt engineering to build an intelligent document processing system, leveraging GPT models to interpret medical language and map treatments to standardized ICD-10 codes, reducing administrative workload on doctors.

Genocide in Gaza: Telling the Story through Data Science *github.com/dsproject*

- Analyzed over 18,000 individual fatality records and 566 days of daily casualty reports from the TechForPalestine dataset, uncovering key demographic and temporal trends in the ongoing humanitarian crisis.
- Utilized Python, NumPy, and matplotlib for data cleaning, statistical analysis, and visual storytelling to present evidence of disproportionate impacts on civilians.
- Demonstrated statistical significance of patterns in age distributions of victims, correlation between infrastructure damage and civilian deaths, and regional differences in casualty rates.

SENTRY – Multimodal Teleoperated Robot System for Emergency Response

- Designed and implemented a VR-based Diminished Reality teleoperation prototype in Unity for search-and-rescue scenarios, helping remote operators explore 360° disaster scenes more safely using combined visual and haptic feedback.
- Connected and controlled a custom haptic belt and thermal camera gimbal from Unity using C# plus UDP & TCP networking, providing real-time directional vibration and heat-spot feedback so operators can better sense victim location and environment.
- Worked on the development of a YOLO Object detection model with Unity Sentis and the DR pipeline, enabling fast, automatic highlighting of potential victims in cluttered scenes to help operators focus their attention more quickly.

CampConnect *github.com/campconnec*

- Developed a mobile app using Flutter to display nearby educational camps using geolocation, connecting displaced children to educational opportunities in crisis-affected areas such as Gaza, Syria, and Sudan.
- Used Firebase to manage app data on the Cloud Firestore and perform user authentication, ensuring real-time data synchronization across devices and secure access.
- Qualified for the final round of the Lifelines Hackathon 2025, standing out among 65 competing teams and showcasing its potential to drive real-world impact in crisis zones.

Real-estate market price predictor

- Built and evaluated predictive models using Machine Learning libraries like Scikit-learn to forecast house prices based on property features, and achieving a prediction accuracy of 85%.
- Performed exploratory data analysis (EDA) using Python libraries such as Pandas, NumPy, and Matplotlib/Seaborn to identify key trends, correlations, and insights in the housing market dataset.

Technologies

Programming Languages: Python, C, C# SQL, JavaScript, TypeScript, Java, Dart, Bash

Frameworks and Technologies: LangChain, Pinecone, ChromaDB, HTML, CSS, React, Next.js, Tailwind, Flutter, JavaFX, Prisma, Firebase

Developer Tools: Hugging Face, Git, GitHub, Docker, Postman, Unity Game Engine, Vercel, Linux (Kali, Ubuntu), Cisco Packet Tracer, Visual Paradigm

Data & Productivity: Power BI, LaTeX, MATLAB, Microsoft Office

Certifications

Associate AI Engineer for Developers *Jan 2026*
Datacamp

Cisco Certified Network Associate 1: Introduction to Networks *Dec 2024*
Cisco Network Academy

Data Analysis with Python: *IBM* *May 2024*
IBM & Coursera