Debjoty Mitra

debjotyms.com

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PROFILE

In my second year of university, I became interested in **Machine Learning**. Since then, along with other development practices, I've been teaching myself **AI/ML**. I am interested in **Computer Vision**, **LLMs** and **RAG Based Systems**, and I've completed several projects in these areas. Furthermore, I have a solid understanding of cloud concepts and hands-on experience with **Microsoft Azure**. I am also **2x** cloud certified, holding the **DP-100: Microsoft Azure Data Scientist Associate** certification. I am also proficient in **Git** and **GitHub**, and I have successfully passed the **GitHub Foundations** Certification exam. I am an active **open-source contributor**, currently collaborating with an amazing team of open-source enthusiasts to localize the **OpenTelemetry** documentation. I also have a **YouTube Channel** and **Personal Blog** where I share everything I learn.

EDUCATION

BRAC University, Dhaka   Jan 2022 – Dec 2025

Bachelor of Science – BS, Computer Science

St. Joseph Higher Secondary School, Dhaka   Jul 2018 – Oct 2020

Higher Secondary – Science

GPA – 5.00/5.00

EXPERIENCE

XOps Lab   Nov 2024 – Present

Founder & Community Manager

- Building an **open-source** platform (**xopslab.org**) for the **AI & Cloud Native** Innovators.
- Developing innovative **AI driven** tools for our community of learners, including an **AI Resume Reviewer**, an **Agentic Job Board**, an **AI Mock Interview Simulator**, & many more in the pipeline.

Markopolo.ai   Feb 2024 – Oct 2024

Data Analytics Intern

- As a Data Analytics Intern at **Markopolo.ai**, I focused on tasks like gathering data from the internet (using **Python** scripts and manual methods), identifying important words, labeling data, analyzing brands, and understanding customer sentiment.
- I had worked on these tasks for two major **MFS** and **Beverage** brands in Bangladesh.

PROJECTS

LangChain Semantic Document Finder

- Built a **semantic search tool** using **LangChain** and **HuggingFace Transformers** to find the most relevant document based on context, not just keywords.
- Used the **all-MiniLM-L6-v2** model to create embeddings for documents and queries, calculating cosine similarity to match user input with the best document.
- **Project link:** https://github.com/debjotyms/langchain-semantic-finder

Aruco Marker Distance Measurement

- Developed a system to accurately measure distances using Aruco markers. Implemented **Computer Vision** techniques to detect markers in images or vides, enabling almost precise distance calculations.
- The project is aimed at measuring distances using a marker known as "**7x7_100.png**" and a custom **checkerboard pattern** for calibration. The main functionality involves capturing images or video frames, detecting the marker, estimating its pose, and calculating the distance from the camera to the marker.
- **Project link:** https://github.com/debjotyms/aruco-marker-distance-measurement

Intrusion Detection System

- Created an intrusion detection system using a dataset from **Kaggle** and used **Streamlit** to build the UI. Implemented algorithms to analyze network traffic and identify potential security breaches.
- **Project link:** https://github.com/debjotyms/Intrusion-Detection-Streamlit-CSE484

TECHNICAL SKILLS

Programming Language: C++, Python

ML/AI: ML, DL, NLP, CV, TensorFlow, PyTorch, LLMs, LangChain

Web Technologies: HTML, CSS, Tailwind CSS, React, Next.js, FastAPI

DMBS: MySQL, PostgreSQL

CERTIFICATIONS

Microsoft Certified: Azure Data Scientist Associate

- **Earned On:** June 2024
- **Credential ID:** 8C564412AD29B5F2
- **Credential URL:** https://learn.microsoft.com/api/credentials/share/en-us/debjotyms/8C564412AD29B5F2

Microsoft Certified: Azure AI Fundamentals

- **Earned On:** Apr 2024
- **Credential ID:** 1FA23F4AAEF5D096
- **Credential URL:** https://learn.microsoft.com/api/credentials/share/en-us/debjotyms/1FA23F4AAEF5D096

GitHub Foundations

- **Earned On:** June 2024
- **Credential URL:** https://www.credly.com/go/7QpDtNlH

VOLUNTEERING

Microsoft Learn Student Ambassador

Community Leader   Jan 2023 – Present

- Learn Student Ambassadors are a global group of campus leaders who are eager to help fellow students, create robust tech communities and develop technical and career skills for the future.
- **Profile Link:** https://mvp.microsoft.com/en-US/studentambassadors/profile/244eb950-2577-4b5e-b71e-fadeb6c2265b

DevChangeMakers   April 2023 – May 2024

Community Manager

- DevChangeMakers is a student-focused community dedicated to skill-building and empowerment. As the Community Manager, I facilitate collaboration, organize events, and cultivate a supportive environment.
- **Community Link:** https://www.facebook.com/groups/718399220046600

TensorFlow User Group Bangladesh   May 2023 – May 2024

Co-organizer

- TensorFlow User Group Bangladesh is a global community backed by **Google** to exploring and advancing the use of **TensorFlow** in various **applications**. Together with the team, we aim to bring collaboration, share knowledge, and inspire innovation within the **TensorFlow community** in Bangladesh.
- **Community Link:** https://www.facebook.com/groups/178663161076600

ACHIEVEMENTS

- **The Duke of Edinburgh's International Award,** 2023 (**Bronze** Standard)
- **Film Fly Experience Australia,** 2019 – **Winner** from BD Region (Hosted by Australian Government)
- **Bangladesh Olympiad in Informatics (BDIO),** 2019 – Top **30** (National Level)
- **Digital Presentation, Josephite Math Mania,** 2018 – **1st** Runner Up (Presentation Topic: Calculus)
- **National High School Programming Contest**, 2017 – **2nd** Runner Up (Regional Level)

RELEVENT COURSEWORK

Computer Science: Object Oriented Programming, Data Structures and Algorithms, DBMS

Mathematics: Linear Algebra, Probability Theory, Elementary Number Theory, Statistics, Calculus