



# UTSHAB KUMAR GHOSH

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Dhaka, Bangladesh

I have been working with Python, Machine Learning, and Data Science for 4+ years. I also have an experience of 1+ year in Full Stack Development. My motto is to collaborate in the field of SWE and ML. With the analytical skill of problem solving, full stack dev, and ML/DL, I want to gather experience and knowledge from a based environment, contributing to the humankind and industry.

## Education

Jan 2017–

Oct 2022

Bachelor of Science: Computer Science & Engineering (CGPA: 3.22)

Rajshahi University of Engineering & Technology – Rajshahi, Bangladesh

## Work Experience

Dec 2022–

Present

Machine Learning Engineer

Nascenia Ltd. – Dhaka, Bangladesh

Department: Machine Learning & Full Stack Dev

- RAG Chatbot for Govt. sites:** I am in the pioneering team of the development of **multilingual conversational chatbots**, including Bengali and English, specifically for government websites. We are developing an end-to-end **RAG (Retrieval Augmented Generation) chatbot system** for document-driven question-answering, utilizing Large Language Models (LLMs) through LangChain. This involves **document chunking, vector embeddings, retrieval-based question-answering techniques**, and **advanced research in LLMs** like **Llama-3**, and **GPT-3.5**, coupled with technical pursuits such as **data scraping, preprocessing, pre-training**, and **fine-tuning the models**. Our teamwork also extend to developing Full Stack solutions, including **Flask APIs and custom Admin Panels**, to ensure seamless integration and customization for our clients.
- Project in Laravel Framework:** Worked as Full Stack developer.
- Building Components with JavaScript, React, PHP.

Feb 2023–

Present

Mentor

Code Studio Academy – Dhaka, Bangladesh

Department: Python, Machine Learning & Data Science

- Currently leading a **Machine Learning Bootcamp** with over **120 enrolled students**. The curriculum covers **foundational concepts in Python, Machine Learning, Deep Learning, SQL, and includes practical, hands-on projects** designed to reinforce learning outcomes.

Oct 2020–

Sep 2022

AI Research Assistant

MyMedicalHUB Int. – Florida, USA (Remote)

Department: Machine Learning

- Gait Analysis Project:** Focused on the **detection of Parkinson's disease utilizing Pattern Recognition, Machine Learning, and Deep Learning models**. Responsibilities included the **analysis of video data** to identify key gait patterns associated with the disease to accurately classify and diagnose Parkinson's disease from the collected data.
- Sports Video and Image Analysis Project:** Engaged in a comprehensive Sports Video and Image Analysis Project, where machine learning techniques such as **pattern recognition with angle-based posture analysis and transfer learning models** were employed. The project focused on extracting valuable insights from sports videos and images to enhance performance analysis and decision-making in athletic contexts.
- Worked with AWS, Apace Server, Django REST API.

## Technical Skills

Programming

Web Development

Data Science, Machine Learning, & Deep Learning

Frameworks, Library & Tools

Mathematics for ML & DL

Database

Cloud

Miscellaneous

Python, C, Data Structures & Algorithms.

ReactJS, SaaS, Tailwind, JavaScript, Django, Flask, PHP, Laravel.

Data Preprocessing, Analysis & Visualization, ANN, CNN, LLM, RAG, LangChain, Rasa, Supervised & Unsupervised Learning Algorithms, Feature Engineering, Feature Selection & Extraction, Fine-Tuning & Training.

TensorFlow, PyTorch, Keras, OpenCV, NumPy, Pandas, Scikit-Learn, Tableau, Excel Spreadsheet.

Algebra, Statistics, Possibility, Geometry, Matrix.

MySQL, MariaDB, Firebase, MongoDB.

AWS, Azure, Apache Server.

Git, Docker, Linux, Latex, MS Office, Adobe Illustrator, Premiere Pro.

## Researches

Accurate Gait Recognition with Inertial Sensors using a New FCN-BiLSTM Architecture

Journal: Computers and Electrical Engineering (Q1, Available: <https://lnkd.in/g8OZYgMt>)

Most Dominant Metabolomic Biomarkers Identification for Lung Cancer

Journal: Informatics in Medicine Unlocked (Q2, Available: <https://lnkd.in/gh8ZaeHK>)

## Projects

Bone Marrow Cell Classification (Ongoing)

[My Machine Learning Projects](#)

[ML Web App with Flask & AWS](#)

[Django Ecommerce Site](#)

[IMDB Clone](#) (ReactJS Project)

## ML Competitions

Kaggle TensorFlow – Help Protect the Great Barrier Reef [Top 49% (1019th out of 2109)]

Datahack Traffic Forecasting [Time Series Dataset, Running]

HackerEarth ML Challenge: Fast, Furious and Insured [86th out of 2796]

HackerEarth ML Challenge: A Fine Windy Day [54th out of 2034]

300+ Problems solved at Codeforces, Codechef, Leetcode, LightOJ and other Online Judges.

## Certifications

Deep Learning Specialization

Institute: deeplearning.ai

Applied Data Science Specialization

Institute: IBM

Data Scientist Career Track

Institute: Datacamp

AI for Medical Diagnosis

Institute: deeplearning.ai

## Interpersonal Skills

Management

Teamwork

Multitasking

Leadership

## Languages

English

Bangla

## Interests

Music & Instruments

Taekwondo