



# 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

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Jan 2017–  
Oct 2022

**Bachelor of Science: Computer Science & Engineering** (CGPA: 3.22)  
Rajshahi University of Engineering & Technology – Rajshahi, Bangladesh

## Work Experience

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Dec 2022–  
Present

**Machine Learning Engineer**  
**Nascenia Ltd.** – Dhaka, Bangladesh  
**Department:** Machine Learning & Full Stack Dev

- RAG Chatbot for Govt. sites:** We're pioneering 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 efforts 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.

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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.

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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

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**Programming**

Python, C, Data Structures & Algorithms.

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**Web Development**

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

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**Data Science, Machine Learning, & Deep Learning**

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

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**Frameworks, Library & Tools**

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

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**Mathematics for ML & DL**

Algebra, Statistics, Possibility, Geometry, Matrix.

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**Database**

MySQL, MariaDB, Firebase, MongoDB.

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**Cloud**

AWS, Azure, Apache Server.

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**Miscellaneous**

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

## Researches

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**Accurate Gait Recognition with Inertial Sensors using a New FCN-BiLSTM Architecture**  
**Journal:** Computers and Electrical Engineering (Q1, Available: <https://lnkd.in/g8QZYgMt>)

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**Most Dominant Metabolomic Biomarkers Identification for Lung Cancer**  
**Journal:** Informatics in Medicine Unlocked (Q2, Available: <https://lnkd.in/gh8ZaeHK>)

## Projects

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**Bone Marrow Cell Classification** (Ongoing)

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[My Machine Learning Projects](#)

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

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[Django Ecommerce Site](#)

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[IMDB Clone](#) (ReactJS Project)

## ML Competitions

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

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**Datahack Traffic Forecasting** [Time Series Dataset, Running]

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

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

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

## Certifications

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**Deep Learning Specialization**  
**Institute:** deeplearning.ai

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**Applied Data Science Specialization**  
**Institute:** IBM

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**Data Scientist Career Track**  
**Institute:** Datacamp

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**AI for Medical Diagnosis**  
**Institute:** deeplearning.ai

## Interpersonal Skills

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Management

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Teamwork

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Multitasking

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Leadership

## Languages

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English

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Bangla

## Interests

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Music & Instruments

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Taekwondo