

# Md Arifuzzaman Swapnil

Data Scientist | AI Engineer | NLP

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## ABOUT ME

Research-oriented Data Scientist with a solid foundation in AI, ML, and NLP, working across video, image, and text data. Experienced in building deep learning and machine learning models using customized datasets for real-world applications like image classification, sentiment analysis, and cyberbullying detection. Proficient in Python, Java, C++, Flask, and Laravel. Passionate about creating intelligent systems and mentoring future tech talents.

## EDUCATIONAL

2021 - 2025	<b>BACHELOR OF SCIENCE IN COMPUTER SCIENCE &amp; ENGINEERING</b> Bangladesh University of Business and Technology (BUBT) MAJOR: Software Engineering CGPA: 3.92 / 4.00
2018 - 2020	<b>HIGHER SECONDARY CERTIFICATE (HSC)</b> Government Science College GPA: 5.00 / 5.00
2018 - 2020	<b>SECONDARY SCHOOL CERTIFICATE (SSC)</b> Shaheed Police Smrity College GPA: 5.00 / 5.00

## WORK EXPERIENCE

Jan, 2025 - Present	<b>TEACHING ASSISTANT (TA), BUBT</b> Bangladesh University of Business and Technology (BUBT) Duration: 8 months Delivered lectures and practical sessions in: <ul style="list-style-type: none"><li>Object-Oriented Programming (OOP) in C++</li><li>Advanced Programming in Java</li><li>Machine Learning (ML)</li></ul>
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## TECHNICAL PROFICIENCIES

- Programming Languages:** C, C++, Java (OOP), Python (Advanced), PHP
- Web Technologies:** HTML5, CSS3, JS, Laravel, Python Flask
- Databases:** MySQL, MongoDB, Firebase
- Tools:** Git, Google Colab, Jupyter Notebook, Kaggle, VS Code
- Model Development:** Dataset Preparation, EDA, Data Preprocessing, Model Training.
- Python libraries:** TensorFlow, Keras, PyTorch, Scikit-learn, OpenCV, Hugging Face Transformers, NLTK, spaCy, Pandas, NumPy, MoviePy, LangChain, pdfplumber, pypdf, SentenceTransformers, FAISS, ChromaDB

## RESEARCH INTERESTS

- Artificial Intelligence (AI)
- Machine Learning (ML)
- Computer Vision
- Image Processing
- Deep Learning (DL)
- Natural Language Processing (NLP)
- Retrieval-Augmented Generation (RAG)
- Convolutional Neural Network (CNN)

## PROJECTS

### [Animal Image Classification Using CNN with Website](#) (project link)

Developed a Convolutional Neural Network using a custom animal dataset and deployed it via a real-time web app using Python Flask. Achieved 99% accuracy using a self-built dataset of 30 animal classes. Deployed via Python Flask web app.

### [Bangla Sign Language Sentiment Analysis](#) (project link)

Built a hybrid model combining CNN and NLP techniques to analyze sentiments in Bangla sign language text; used a self-created dataset.

### [Rag Multilingual Bangla AI with Realtime Website](#) (project link)

Built Bengali Q&A RAG system using NLP, vector search, and LLM with 95%+ accuracy on semantic queries. Designed ML pipeline with multilingual embeddings, FAISS database, and Flask API serving real-time responses.

### [LLM-Based Career Guidance System with an Interactive Web Interface](#) (project link)

Built a career assistant web app using Groq LLM with features like a career-focused chatbot, resume evaluation with improvement tips, AI-generated interview questions from PDFs, and a smart resume builder to help users create professional resumes easily.

### [Cyberbullying Detection Using NLP](#) (project link)

Designed a sentiment analysis system to detect cyberbullying from online text content using natural language processing methods.

### [Bangla News Classification System](#) (project link)

Created an NLP-based model to classify Bangla news articles into categories using a custom dataset and text classification techniques.

## AWARDS & ACHIEVEMENTS

### ITEE (October 2024)

Ranked 30th in Bangladesh in the Information Technology Engineers Examination (ITEE) conducted by IPA, Japan, among approximately 600,000 applicants annually.

### Programming Contest

Achieved 5th Place in the Senior Division of the Intra-University Competitive Programming Contest at BUBT.

## CERTIFICATIONS

- Fullstack Laravel Developer – InteractiveCares
- Software Quality Controller – FastFlowUp
- Natural Language Processing – InnovativeSkillsBD