

# Sabbir Ahmed

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## Education

**Jashore University of Science and Technology**

*Bachelor of Science in Computer Science and Engineering*

*Jan 2020 - Current*

**Govt. Sundarban Adarsha College, Khulna**

*Higher Secondary Certificate*

*GPA: 5.00/5.00*

## Relevant Coursework

- Data Structure
- Cloud Computing
- Object-Oriented Programming
- Data Mining and Warehousing
- Database Management System
- Probability and Statistics
- Artificial Intelligence
- Machine Learning
- Image Processing

## Research Interests

**Field of Interest:** Computer Vision, Natural Language Processing, Transformer Architecture

I am interested in leveraging these technologies to improve visual recognition and language processing. My goal is to develop innovative AI solutions and contribute to research that advances the field of artificial intelligence.

## Skills

**Programming Languages:** C/C++, Java, Python, Bash

**Frameworks and Libraries:** Django, PyTorch, TensorFlow, Scikit-Learn, Pandas

**Databases:** MySQL, Firebase

**Office and Document Applications:** L<sup>A</sup>T<sub>E</sub>X, Microsoft Office Suite

## Languages

**Bengali:** Native

**English:** Proficient (IELTS 7.0)

*Nov 2024*

## Projects

**Automatic License Plate Detection Using ML**

*Jan 2024 - May 2024*

**Tools Used:** Python, Django, YOLOv8 model

- Co-developed an AI-driven Bengali License Plate detection system at Visual Machine Intelligence Lab.
- Integrated a LIDAR with Raspberry Pi to automate registration and storage.

**AI Chatbot using Open Source LLM**

*May 2024*

**Tools Used:** Ollama with llama3-8b, Streamlit

Developed a bot that answers user queries using an open-source Large Language Model. The bot searches information provided in a PDF and answers questions, working as a smart sales assistant 24/7.

**Virtual Photo Booth**

*Sep 2023*

**Tools Used:** Python, QtPy6, PyTorch, BASNet Model

Created a Virtual Photo Booth app using BASNet, Python, and QtPy6. This app separates the user from the background and replaces it with a new background chosen by the user. Presented this project at CSE Fest-JUST 2023.

**NASA Space Apps Challenge 2023**

*Aug 2023*

**Tools Used:** HTML, CSS, Bootstrap, three.js, Python

Led team Entergalactic, selected among the top teams for the 2nd round. Features include viewing Mars in 3D, learning about its attributes, and getting weather reports from rovers on Mars.

## Experience

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### **ICT Olympiad Bangladesh**

*Apr 2022 - Current*

**Position:** University Team Leader

### **Research Assistant, VMI Lab, JUST**

*Nov 2023 - Current*

Researched advanced image segmentation models, exploring and implementing cutting-edge image processing algorithms. Gained hands-on experience in applying state-of-the-art techniques to real-world datasets, contributing to the lab's ongoing projects.

### **Lab Assistant, Dept. of CSE, JUST**

*Feb 2024 - June 2024*

Facilitated hands-on training for 25 students on MS Office Suite. Designed and evaluated midterm and final exams and quizzes to enhance student understanding and assess proficiency in MS Office tools.

### **Machine Learning Teaching Assistant, JUST**

*Oct 2024 - Current*

Supporting lab sessions for 50+ students on core machine learning topics, including supervised and unsupervised learning. Assisting in the preparation of assignments, quizzes, and projects to reinforce student understanding. Aiming to enhance student engagement through hands-on demonstrations and personalized guidance.

## Awards

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### **MELBU Summer School, Leipzig, Germany**

*Aug 18 - Aug 29, 2022*

**Funding:** Erasmus+ Scholarship

Participated in an intensive program focusing on Leadership, Entrepreneurship, and Innovation Management. Enhanced my skills and gained valuable experience through collaborative learning.

### **a2i Pregnancy Monitoring Innovation Challenge 2022**

*Nov 2022*

**Awarding Institution:** ICT Division, Cabinet Division, UNDP

Selected as one of the youngest participants from a pool of 40 candidates across Bangladesh.