



# TANVIR AHMED

LEARNER | MACHINE LEARNING & DEEP LEARNING ENTHUSIAST

## CONTACT

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## EDUCATION

2022–2025

DAFFODIL INTERNATIONAL  
UNIVERSITY

- B.Sc. in Computer Science  
and Engineering

2018–2020

CANTONMENT COLLEGE JASHORE

- Higher Secondary Certificate
- GPA: 5.00

2018–2020

NABOJIBON INSTITUTE SATKHIRA

- Secondary School Certificate
- GPA: 5.00

## SKILLS

- C | C++ | Java | Python
- Numpy
- Pandas
- Matplotlib
- OpenCv
- Scikit-Learn
- Keras
- Pygame
- PyTorch
- TensorFlow
- Html | CSS
- Javascript
- PHP

## PROFILE

Curious by nature and driven by innovation, I'm a computer science student passionate about crafting smart solutions with code. From decoding plant diseases with deep learning to building cross-platform tools and automation systems, I blend research with real-world impact. Whether it's training models, building apps, or simplifying complex tech, I love transforming possibilities into working products. Always learning, always building—one line of code at a time.

## PROJECTS

### Edu-Buddy AI Assistant

2023 – 2024

Edu-Buddy is a voice-activated assistant designed to support students in their academic and personal life. Similar to other virtual assistants like Google Assistant or Siri. Edu-Buddy is tailored specifically for educational use. It provides functionalities such as reminders for assignments, help with study schedules, access to educational resources, and much more. This project aims to create an easy and user-friendly environment for students to make their life more easy and more convenient.

**Tech Stack:** Python, SpeechRecognition, Google Text-to-Speech, SQLite, Tkinter.

### AgroKart BD

2024 – Present

Developed both a mobile app using Flutter and a responsive web application to connect farmers directly with consumers, enabling the sale of fresh vegetables and crops without intermediaries.

- Mobile App: Built with Flutter; features include user authentication, product browsing, cart management, and a blog section.
- Web App: Developed with HTML, CSS, and JavaScript (frontend) and PHP and SQL (backend); supports user login, product listing, order processing, etc.

**Tech Stack:** Flutter, Dart, Firebase, HTML, CSS, JavaScript, PHP, SQL

### Hand Gesture Virtual Mouse

2023 – 2024

Built a virtual mouse system that uses hand gestures to control a computer, inspired by Tony Stark's tech. Integrated real-time hand tracking with computer vision to allow cursor movement, clicking, scrolling, and more—entirely hands-free.

**Tech Stack:** Python, OpenCV, Mediapipe, PyAutoGUI

### Cross-Platform Task Manager

2023 – 2024

Built a virtual mouse system that uses hand gestures to control a computer, inspired by Tony Stark's tech. Integrated real-time hand tracking with computer vision to allow cursor movement, clicking, scrolling, and more—entirely hands-free. Developed a lightweight command-line task manager inspired by Windows Task Manager, Linux top/htop, and macOS Activity Monitor. Designed for system resource monitoring and process control across platforms.

**Tech Stack:** Python, psutil, CLI, cross-platform (Windows/Linux/macOS)

- MySQL
- Flutter
- Firebase
- Git and GitHub
- Linux
- Operating System
- Computer Architecture
- Teamwork
- Critical Thinking
- UI/UX Design
- Graphics Design
- Video Editing
- Microsoft Office

## TOOLS

- Git
- GitHub
- Visual Studio Code
- Figma
- Adobe Xd
- Vercel
- Netlify
- Google Colab
- Kaggle

## RESEARCH AREA

- Computer Vision
- Machine Learning
- Deep Learning
- Image Processing
- Internet of Things (IoT)
- Human-computer interaction
- Biomedical
- Natural Language Processing
- Video Processing
- Cybersecurity
- Data Science

## LANGUAGES

- English (Fluent)
- Bengali (Fluent)
- Hindi (Basics)

### 4 In a Row | Maze Rivals

2024 - 2025

Developed two brain development games to enhance cognitive skills and logical thinking:

- 4 in a Row: A strategic two-player game with AI using Minimax and alpha-beta pruning, designed to improve logical reasoning and decision-making.
- Maze Rival: A competitive maze-solving game with dynamic levels and real-time multiplayer, aimed at boosting problem-solving abilities and mental agility.

**Tech Stack:** Python, Pygame, Minimax Algorithm, Alpha-Beta Pruning, BFS/DFS, A\*, Game Design, Tinker

### Automation Tool for Local Garment

2024 - 2025

Developed a Python GUI application to automate data entry into websites by uploading Excel sheets. Enabled users to dynamically select web input fields and submit buttons, allowing seamless automation of repetitive form submissions using Selenium. Features a clean, user-friendly interface for efficient workflow.

**Tech Stack:** Python, Selenium, Tkinter.

### Lier Ditector

2024 - 2025

Built a Python-based lie detection system using machine learning and signal processing techniques. Analyzed behavioral or physiological data (e.g., voice stress, facial cues) to predict truthfulness with accuracy, demonstrating practical application of AI for deception detection.

**Tech Stack:** Python, scikit-learn, OpenCV, librosa, Google Text-to-Speech, SpeechRecognition

## RESEARCH

### Plant Leaf Disease Recognition Dataset

2023 - 2024

Curated and published a diverse dataset of 20,000+ images of healthy and diseased leaves (zucchini, hibiscus, gourd, papaya) to support plant disease detection research.

Available on Mendeley Data: [Plant Leaf Disease Recognition Dataset](#)

### Deep Learning Models for Multi-Class Plant Leaf Disease Classification

2023 - 2024

- Conducted extensive research on applying convolutional neural networks (CNNs) to classify multiple plant leaf diseases using a dataset of over 20000 annotated images.
- Developed, trained, and evaluated several deep learning architectures, achieving classification accuracy exceeding 97%.

### Truth in Pixel: A Novel Approach to Deepfake Detection

2024 - Present

Researching deepfake detection using pixel-level inconsistencies and visual artifacts. Developing deep learning models to identify manipulated content with high accuracy.

## REFERENCE

### Shah Md Tanvir Siddiquee

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Daffodil International University

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### Mr. Imran Hossain

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