Akarshan Ghosh

akarshanghosh28@gmail.com | GitHub | My Portfolio | LinkedIn | Twitter/X

Summary

An adept full-stack developer with proficiency in both frontend and backend development, coupled with a strong passion for machine learning and ethical hacking.

Technical Skill

- **Languages:-** Python,C
- **Frontend:-** JavaScript, React,js, TypeScript.
- **Backend:-** Django, Node.js,Express.js
- **Database:-** MySQL, MongoDB
- **DevOps:-** AWS

Experience

Intern, IIT Guwahati – TIDF September 2024 – February 2025

- I developed a MERN stack-based web application for the Indian Railways to monitor train emergency brake systems and provide real-time data on chain status, train location (latitude and longitude), and temperature.
- I built and optimized the backend with Node.js and Express.js to handle API integration and securely manage IoT data.
- Tools and Technologies I used include React, Node.js, Express.js, MongoDB, Tailwind CSS, JavaScript, and Thunder Client.

Intern, IIT Guwahati – TIDF June 2024 – July 2024

- Built a flood monitoring system that monitors the water level to alert the user using NodeMCU ESP8266, GSM, and sonar sensor.
- I proficiently managed programming for databases and websites using JavaScript, Django, SQL, and Python.

Projects

E-Chain Tracker MERN app github Link

- Developed a web application using the MERN (MongoDB, Express.js, React, Node.js) stack as part of a project under the Indian Railways.
- Implemented a user authentication system where users can log in and search for trains using their train numbers.
- Designed a detailed train coach page displaying real-time IoT-based data, including chain status, train location (latitude and longitude), and temperature.
- Created an interactive and responsive frontend using React and Tailwind CSS to ensure seamless user experience.
- Built the backend with Node.js and Express.js for handling API integrations, managing IoT data, and ensuring secure database interactions.
- Utilized MongoDB for efficient storage and retrieval of train data and user information.
- Tested and managed API requests using Thunder Client for JSON files to validate data flow and responses.
- Tools and Technologies: JavaScript, React, Node.js, Express.js, Tailwind CSS, MongoDB, Thunder Client.

Flood monitoring system webapp github Link

- I have created a web application using the Django framework.I developed a web app using Django as a framework.
- Frontend development using Javascript and Tailwind css interactive, and responsive user interface.

- Backend development using Python and Django to handle API integration and database operations.
- Database management utilized SQL3 as a database to store to manage and store water level and user data
- Tools Used: Javascript, Tailwind CSS, python, Django, thingspeak, SQL

IoT based flood monitoring system

- Developed a IoT based flood monitoring prototype using Node MCU ESP8266 microprocessor, sonar sensor and GSM.
- The sonar sensor used to measured the data. The data is then process through microprocessor.
- Then the process data is send to Thingspeak Cloud using GSM WIFI module
- The Thingspeak store the process data and then the data is display in our website using API
- Tools Used: Solar panel, Solar charge controller, Embedded C, Node MCU ESP8266, Sonar Sensor, GSM, Thingspeak

Education

Girijananda Chowdhury University, Btech in Electronics and Communication Engineering — Sept 2022 – May 2026

Kendriya Vidyalaya Lumding, Completed my Higher Studies — May 2019 – March 2021