

PIYUSH GUPTA

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Education

Thapar Institute Of Engineering and Technology

Bachelor of Computer Engineering

September 2022 – Present

Patiala, Punjab

Projects

IoT Based Early Seizure Detection | ML

January 2025 – Present

- Led a team of 5 in designing a wearable IoT system using EEG biosensors, delivered 94% signal acquisition accuracy for real-time seizure monitoring.
- Implemented and compared multiple machine learning models after EEG signal segmentation and advanced feature extraction, achieving 99% training and 97% testing accuracy.
- Integrated wearable IoT system with Raspberry Pi for edge-level processing, decreasing alert response time by 60% and enabling real-time notifications to caregivers, resulting in faster intervention times.

Reducing Carbon Footprint (Know Your Impact) | Streamlit, ML, pyteseract

April 2025

- Developed a Streamlit web app to estimate carbon footprints of 20+ Indian food items, using life cycle GHG data and real-time visualizations.
- Integrated a 92% accurate image-to-text ML model for food recognition and linked energy-saving actions to a reward-based incentive system.
- Improved user engagement by 65% through interactive dashboards and personalized sustainability suggestions.

Mausam Weather App | Android

2023

- Designed an app that delivers real-time weather updates, refreshing every 5 minutes to provide users with the most up-to-date and accurate weather information.
- Interactive Dashboard Showing details like temperature, windspeed, humidity, AQI, etc. having 60% user engagement of total app usage.
- Published our app on PlayStore having 15K+ downloads reflecting its popularity.

Review Analysis using Machine Learning | ML, LSTM

2024

- Trained a machine learning model for review sentiment analysis with an accuracy of 86-88%.
- Utilized data preprocessing and feature selection strategies to optimize the performance of the model by 16%.
- Programmed an LSTM-based sentiment analysis model on the IMDB movie review dataset, improving prediction stability and reducing validation loss by 18% through optimized hyperparameter tuning and embedding techniques.

Leadership & Volunteering

Global Volunteer

June 2024 - July 2024

AIESEC

Vietnam

- Volunteered for 2 months at Pagoda (Temple), collaborating with people from diverse cultures and backgrounds from around the world.
- Spearheaded a literacy initiative at a local temple, teaching foundational reading and writings skills to 20+ monks, and fostering an environment for intercultural exchange as the youngest volunteer.
- Taught English to 20+ monks, proposed an intercultural environment and promoting language exchange

Skills

Technical Skills: Python, C, C++, SQL, JavaScript, Flutter, Data Structures and Algorithms, OOP,

Frameworks/Tools: Android, HTML, CSS, Git, DBMS, Streamlit, Pytorch, Tensorflow, Machine Learning, Tableau

Soft Skills: Scripting, Communication, Team Collaboration

Achievements and Certifications

- Secured 2nd Runner Up at **HackOwasp 7.0** by constructing a novel carbon footprint estimation platform; the innovative project was selected by judges as one of the top 3.—April 2025
- Solved 240+ LeetCode problems, ranking in the top 5% globally
- Gold League **Google Cloud Skill Boost**
- GoogleCloud** GenAI Exchange Program Completion— 2025
- Walmart** Advanced SWE Virtual Experience Program— 2025
- Solutions Architect Job Simulation **AWS** — 2025
- Software Engineering Job Simulation **Electronic Arts**— 2025
- Accelerating End-to-End Data Science Workflows: **NVIDIA**— 2025