

# Shivam Kumar

✉ sk0255980@gmail.com — [in linkedin.com/in/shivamkum4r](https://www.linkedin.com/in/shivamkum4r) — [github.com/ShivamKum4r](https://github.com/ShivamKum4r) — [shivamkum4r.vercel.app](https://shivamkum4r.vercel.app)

## Summary

A motivated Electronics and Communication Engineering undergraduate skilled in C++ , Python, Machine Learning, and data-driven development. Experienced in building AI-powered applications, interactive dashboards, and deploying models using modern tools like Streamlit, Docker, and PyTorch.

## Education

### Asansol Engineering College

Bachelor of Technology in Electronics & Communication Engineering

2022–26

CGPA: 7.0/10

### Kendriya Vidyalaya Andar

Class X – 74.6%

2018–19

Class XII – 81.6%

2020–21

## Skills

- C/C++ , Python, SQL
- Tools: Jupyter Notebook, VS Code, Google Colab
- HTML, CSS, JavaScript,Django,Sql
- Git (Version Control)
- Data Science and Machine Learning
- IoT and Embedded Systems
- Libraries: pandas, NumPy, scikit-learn, matplotlib

## Projects

### Ethan / AI Robot

- Created a static AI robot from e-waste for the NAAC visit (Dec 4, 2023), combining speech-based interaction and IoT-driven motion detection.
- **3D Design:** Modeled the robot's structure using Pepakura and AutoCAD.
- **AI Module:** Enabled bidirectional voice interaction using speech recognition and text-to-speech synthesis.
- **IoT System:** Integrated ultrasonic sensors with Arduino to trigger reactive head movements based on proximity.

### Sentiment Analysis for E-commerce Reviews

- Analyzed customer reviews from a Kaggle dataset to derive sentiment trends and support business insights.
- Applied NLP techniques including preprocessing, vectorization, and feature extraction for model input.
- Achieved strong classification accuracy using Logistic Regression and compared results with alternative models.
- Compiled findings into a detailed report highlighting key insights and model performance.

### Drug Toxicity Prediction

[Live Demo](#)

- Built a Streamlit dashboard to predict drug toxicity using MLP and GCN models trained on the Tox21 dataset.
- Processed SMILES strings to extract molecular fingerprints and atom-level features via RDKit and PyTorch Geometric.
- Trained GCN models with calibrated thresholds; illustrated performance using interactive visualizations (Plotly, Seaborn).
- Containerized and deployed the app with Docker and Render, resolving dependency conflicts for stable hosting.

## Extra-Curricular Activities

### Students Innovation Center (SIC) — 2024–Present

- Led and coordinated innovation workshops and technical events across ECE and CS domains.
- Mentored peers on CVs, project pitching, circuit/system design, and software development.
- Reviewed technical documents, prototypes, and presentations for clarity and impact.
- Provided technical support during **Electronic Innovation 9.0**, assisting a team that secured **3rd place**.

## Languages

- English – Fluent
- Hindi – Fluent
- Bengali – Conversational