SAYANDIP SAHA

Siliguri,West Bengal
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EDUCATION

Jalpaiguri Government Engineering College **2023 – 2027**
*Bachelor of Technology in Information Technology - **CGPA - 9.14** till 4th Semester* *Jalpaiguri, West Bengal*

EXPERIENCE

Summer Research Intern at Indian Statistical Institute, Kolkata **June 2025 - July 2025**

Deepfake video Detection | PyTorch, OpenCV,MTCNN, Torchvision,Transformer, Scikit-Learn

- Developed a hybrid Deep Fake Detection model using Vision Transformer and auto encoder to detect temporal level inconsistencies from sequence of video frames achieving 65% test accuracy.
- Applied learning rate scheduler, weighted sampling, and data augmentation, trained on FaceForensics dataset.
- Published a paper on 12th International Conference on Microelectronics, Circuits and Systems, Micro2025

PROJECTS

GPT2 model From Scratch | PyTorch, tiktoken, hugging faces, matplotlib **2025**

- Implemented BPE Tokenizer to split raw text into sub word units,with total of 5145 tokens in dataset
- Implement 165 Million parameter GPT2 architecture of 12 layers decoder block each with 12 attention heads

MedGPT | Python,hugging faces, Langchain,Flask,Pinecone,React,Postgresql,SQLAlchemy **2025**

- Built a medical QnA system (MedGPT) using a RAG pipeline, integrating Pinecone as a vector database, OpenAI's gpt-oss-120B LLM and Sentence-Transformer embeddings
- Implemented techniques like Semantic Chunker, ContextualCompressionRetriever to deliver relevant context.
- Developed an end-to-end medical assistant capable of suggesting accurate causes, symptoms, and treatment.

AgriTech Web Solutions | Python, TensorFlow/Keras, Scikit-Learn, Flask, Docker, GitHub, Render **2025**

- Built Deployed a Flask Web App integrating ML models for crop disease detection, crop recommendation, and fertilizer suggestion on Render.
- Developed a CNN-based disease detection model optimized with TFLite for real-time predictions.
- Implemented ML models for crop and fertilizer recommendations using Random Forest and NPK-based analysis to enhance yield and sustainability.

TECHNICAL SKILLS

Languages: Python, C, C++, Javascript

Technologies/Frameworks: Numpy, Pandas, Matplotlib, Seaborn, Pytorch, Optuna, Tensorflow, Scikitlearn, LangChain,LangGraph, Hugging Faces, Vector Databases, Flask, FastAPI, Linux, GitHub, Git, HTML, CSS, JS, React.js, Node.js, MongoDB, Express.js,SQL

EXTRACURRICULAR

Training and Placement Cell **Dec 2023 –Present**
SPOC *Jalpaiguri*
Coordinated for Oncampus placement drives

GDSC JGEC **November 2024 –Present**
AI/ML Lead *Jalpaiguri*
Organized Seminars and mentoring Sessions

Achievements

Participated in Google Solution Challenge 2024 and 2025.
Participated in Smart India Hackathon
Achieved a rank of under 4000 among more than 82k teams in Amazon ML Challenge 2025

CODING PLATFORMS

Leetcode, Max rating **1699+**
Solved **200+** Problems across **Codeforces**
Newbie on Codeforces Max Rating **885+**

CERTIFICATIONS

- Machine Learning Specialization