

SHRUTIK PATIL

+91 8483032099 ✉ shrutikpatil.iitkgp25@gmail.com [in linkedin](#) [github](#)

EDUCATION

Indian Institute of Technology Kharagpur

B.Tech + M.Tech in Chemical Engineering

Nov 2020 – Jun 2025

Kharagpur, West Bengal

EXPERIENCE

Enrichmentors

Mar 2024 – Jul 2024

Data Science Intern — Course Recommendation Chatbot

Remote

- Architected a Chatbot using RAG, integrating Lang Chain, Hugging Face, and Streamlit for personalized recommendations
- Utilized Hugging Face's text embeddings with FAISS for similarity searches, resulting in a robust responsive system
- Created a custom prompt template in Lang Chain's RetrievalQA, leveraging LLaMA-8B for accurate relevant responses
- Attained an F1 Score of 0.89 and BLEU Score of 0.82, enhancing relevance and user satisfaction with precise responses

Darzee

May 2023 – Aug 2023

Software Engineer Intern

Remote

- Developed responsive website with React.js, JavaScript, CSS using 20+ reusable components, reducing dev time by 25%
- Optimized mobile apps using Flutter framework, implementing data-driven UI enhancements that increased user sessions

PROJECTS

BooksThatFeelLikeThis | Python, PyTorch, SentenceTransformers

Dec 2024

- * Built multimodal book recommendation engine combining MiniLM-L6-v2 text and CLIP image embeddings
- * Achieved 82% Precision@5 on evaluation set, improving recommendation accuracy by 12% vs baseline MiniLM
- * Designed scalable FAISS vector search pipeline for 20K+ books with adjustable text/image weighting interface

AI Agent for Trend Analysis | Python, SentenceTransformers, scikit-learn, FAISS

Jan 2025

- * Built multi-agent NLP pipeline to classify and analyze 50K+ app reviews with 85% deduplication accuracy
- * Applied SentenceTransformer embeddings + FAISS clustering preventing 89+ duplicate topics improving trend detection
- * Enabled automated topic evolution tracking, discovering new issue categories and generating trend matrices

Sentiment Analysis with BERT | NLP & LLM's

Jun 2025

- * Trained a sentiment analysis model on the Twitter dataset with three validation splits, improving sentiment generalization
- * Fine-tuned a BERT-based transformer model using Hugging Face and AdamW optimizer, achieving a 90.08% F1 score
- * Designed a real-time sentiment prediction demo app with Gradio, integrating the pre-trained model for user interactions

Hand Glove Detection System | Python, YOLOv8, OpenCV, PyTorch

July 2025

- * Built real-time hand detection, glove classification system using YOLOv8 achieving 88% precision, 85% recall, 82% mAP@0.5
- * Developed safety compliance pipeline with 91% classification accuracy and critical miss rate reduced to under 3%
- * Optimized for production deployment with 15 FPS inference speed, data augmentation, and automated JSON logging system

COMPETITION

Data Analytics Competition — Inter Hall — IIT Kharagpur

Mar 2022 – Apr 2022

- * Predicted monthly inventory levels for warehouses using 2+ years historical data with ML and time series models
- * Applied seasonal decomposition identifying linear seasonality patterns across multiple SKU time series
- * Improved forecast accuracy from ARIMA model (48.63% MAPE) to LSTM neural network achieving 1.31% MAPE

TECHNICAL SKILLS

Programming Languages: Python, C++, JavaScript, HTML/CSS, SQL

Machine Learning & NLP: scikit-learn, PyTorch, TensorFlow, Keras, Transformers (Hugging Face), LangChain, SentenceTransformers, spaCy, NLTK

Data Analysis & Visualization: NumPy, Pandas, SciPy, Matplotlib, Seaborn, Plotly, Tableau, Power BI, MS Excel

Frameworks & Tools: Streamlit, Gradio, Flask, Bootstrap, FAISS, Git/GitHub, Google Colab, VS Code, MySQL, Linux