SUSHIL

ACADEMIC PROFILE			
Degree/Certificate	Institution	Percentage/CGPA	Year
B-Tech	Electrical Engineering IIT (BHU), Varanasi	8.67	2025
CBSE (XII)	PRINCE UCH MADHYAMIK VIDYALAYA SIKAR RAJ	93.60	2020
CBSE (X)	SAINT SOPHIA SR SEC SCHOOL SEC 15-A HISSAR HRY	89.40	2018

SKILLS

- Languages: C++, Python, SQL
- Tools/ Frameworks: Jupyter Notebook, Tableau, Pandas, Numpy, Matplotlib, Scikit-learn, Tensorflow, Keras
- Area of Interest: Data Science, Machine Learning, Deep Learning, NLP, Astronomy, Problem Solving

INTERNSHIP/TRAINING

Labh Infocom Pvt. Ltd. | Python Developer Intern

May 2024 - July 2024

- Created a web app using Flask as the backend and Jinja templates for dynamic content rendering.
- Designed and utilized Firestore NoSQL database and Firebase for efficient data management.
- Developed a LangChain pipeline for text generation using prompt engineering and OpenAl API of GPT-4o model.
- Employed Markdown-it for data representation and KaTeX for parsing and rendering mathematical formulas.
- Exposure: HTML, CSS, JavaScript, Jinja, OpenAl APIs, Flask, Firebase, LangChain, Markdown-it, KaTeX.

PROJECTS

ConversionCrusher: Predictive Analytics for Digital Marketing Domination

- Conducted EDA on digital marketing data using rugplots, pie charts, and correlation matrices to uncover patterns.
- Applied feature scaling, target encoding, and addressed imbalance via SMOTE and undersampling techniques.
- Optimized ML models; CatBoost achieved best F1 score 0.9684 after Grid Search CV hyperparameter tuning.
- Evaluated using precision-recall curves and confusion matrices; 98% precision up to 90% recall on test data.
- Exposure Python, pandas, numpy, scikit-learn, CatBoost, SMOTE, seaborn, matplotlib, GridSearchCV

MindSense: Multi-Class Sentiment Analysis for Mental Health Conditions

- Performed **EDA** to generate **word clouds** and analyzed **frequency distributions** for 7 mental health conditions.
- Applied **TF-IDF** + **SMOTE** with **XGBoost**, achieving **74%** accuracy and improving **F1** scores on imbalanced classes.
- Used Word2Vec with Bi-LSTM, increasing accuracy to 76% and improving performance on minority conditions.
- Exposure Python, NLTK, scikit-learn, TensorFlow, Keras, Word2Vec, Text preprocessing, Data augmentation

Mental Health Chatbot

- Engineered a chatbot for psychological support and context-aware mental health conversations by optimizing Falcon-7B LLM with QLoRA and bitsandbytes, reducing memory usage by 60% using quantization and PEFT
- Established the chatbot with **Gradio**, incorporating historical conversational memory for up to **2 conversations**.

POSITION OF RESPONSIBILITY

Joint Secretary | Fine Arts Club | Cultural Council, IIT BHU

May 2023 - April 2024

- Managed INR 150k club budget for workshops, exhibitions, and events, ensuring efficient use of resources.
- Led Fine Arts Club at IIT Roorkee and Inter IIT 6.0, IIT KGP, securing podium finishes through strong leadership.

Creative Manager | Spardha'23 | Kashiyatra'24 | Technex'24

• Spearheaded and coordinated team of 35+ members to enhance the campus aesthetics during fests.

HONOURS AND ACHIEVEMENTS

- Solved over 650+ problems across various categories on LeetCode. handle
- Inter IIT Cultural Meet 6.0, IIT Kharagpur. Led a team of 15 in multiple events, securing the Silver Cup for Fine Arts.
- Secured 1st Position in Recognizance, a Machine Learning competition in Prastuti'23, IIT BHU, Varanasi.
- Secured 1st Position in the Case Study competition at National Space Student Challenge'22, IIT Kharagpur.

EXTRA-CURRICULAR ACTIVITIES

- Fine Arts Club, IIT BHU: Represented IIT BHU at Inter IIT 5.0, IIT Madras, secured 4th position in Kalakriti'22.
- Astronomy Club, IIT BHU: Secured 2nd place in Space Flight Simulator competition, reached pre-final round of International Astronomy and Astrophysics Competition 2022 and final round of AstroQuiz, Technex'22.

E: Address: