



# SATYAM SONI



## ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech in Biochemical Engineering & Biotechnology	Indian Institute of Technology Delhi	5.68
2021	Central Board of Secondary Education	G.S.V.M. Sr. Sec. School	91.8
2019	Central Board of Secondary Education	G.S.V.M. Sr. Sec. School	88.8

## SCHOLASTIC ACHIEVEMENTS

- **Machine Learning Certification:** Completed Stanford University **Machine Learning** course instructed by **Prof. Andrew Ng**
- **Data Analytics Certification:** Acquired proficiency in the online Simplilearn **Data Analysis** course instructed by **Prof. Gary Marcado**
- **Akhil Bhartiya Cultural Events:** Represented **Eastern Uttar Pradesh** and achieved **3rd place** in National Quiz Competitions
- **Joint Entrance Examination, Advanced:** Selected from the **top 1%** of applicants, from a pool exceeding **250,000** candidates

## PROJECTS

- **Stock Market Price Prediction using Sentiment Analysis:** [Jan 2024 - Present]
  - Developed a robust predictive model leveraging **LSTM neural networks** to forecast stock prices for Google, Meta and Tesla
  - Implemented **2-tier pipeline**: aggregated Yahoo Finance historical data and real-time sentiment via **BeautifulSoup** and **VADER**
  - Overcame intricate **integration challenges with HuggingFace Space**, optimizing connectivity with **Hopworks** FeatureGroups
  - Achieved accurate stock predictions with **low RMSE** on unseen data and facilitated **continuous improvement** via daily retraining
- **LLM based PDF Conversational Interface:** [Nov 2023 - Jan 2024]
  - Engineered an LLM-powered PDF chatbot using **Sentence-BERT** and **FAISS** for efficient document embedding and retrieval
  - Utilized **GPT-3.5, PEFT, LoRa, Langchain & Streamlit** to optimize data processing, model fine-tuning, and real-time inference
  - Integrated **RAG with Llama 70B**, utilizing **advanced embeddings** and **vector databases** for scalable, precise question-answering
  - Achieved a scalable MLops infrastructure with use of fine-tuning, yielding improved material retrieval and referencing **accuracy of 86%**.
- **Machine Learning Model for Diabetes Risk Identification:** [Aug, 2023 - Dec, 2023]
  - Developed a prediction model with preprocessing, **EDA**, multiple classifiers and **deployment**, including a UI for model explainability
  - Leveraged technologies like **KNeighborsClassifier, SGDClassifier, BernoulliNB, YData Synthetic, Azure, & Hugging Face Spaces**
  - Led end-to-end project, tackled data imbalance with **CTGAN**, and enhanced recall & accuracy to **91%** using **RandomForestClassifier**
  - Deployed **daily oversampling** using YData model on Modal, saving **1000 records** daily to **Hopworks feature**, optimizing data robustness
- **Real Estate Price Analysis and Forecasting:** [May, 2023 - July, 2023]
  - Implemented a comprehensive data pipeline using **Scrapy** to gather real estate data from multiple sources, enhancing dataset quality
  - Employed Python, Scrapy for data collection, and machine learning models like **XGBoost** and **Linear Regression** for predictions
  - Enhanced model score to **85%** using techniques like **Hyperparameter tuning, L1/L2 regularization, ensemble methods** etc.
- **Automated Quiz System and Mathematical Calculator:** *Prof. Rohan Paul* [Jan, 2023 - June, 2023]
  - Used python tuples and lists for creation of an automated Quiz System, which was modeled after software like Moodle
  - Built a **Calculator** that operates addition, subtraction, multiplication, division, modulus and brackets on string input in Python

## TECHNICAL SKILLS

- **Programming Languages:** Python, SQL, R • **Libraries:** Tensorflow, Keras, Scikit-Learn, Seaborn, Transformers(Hugging Face)
- **Software & Tools:** Jupyter notebook, Google Colab, VS Code, Git, GitHub, AWS, Microsoft Azure, Streamlit, Flask, Hopworks

## POSITIONS OF RESPONSIBILITY

- **Marketing Executive, Physics & Astronomy Club, Indian Institute of Technology Delhi:** [July 2023 - May 2024]
  - Acquired and onboarded over **10 sponsors** for the annual event 'Tryst,' including a key cosponsor contributing **\$100,000**
  - Demonstrated **strong negotiation skills and fostered partnerships** to enhance event funding and ensure success
  - Devised a **pan-India media plan** with **The Hindu, 9xM, IshqFM, & 15+ magazines**, ensuring extensive coverage and outreach
  - Activated **new streams for sponsorship**, pioneered sectors like education, construction which contributed **5% to the budget**
- **Activity Head, Co-curricular & Academic Interaction Council, IIT Delhi:** [Dec 2023 - April 2024]
  - Spearheaded **financial oversight and budget management**, directly handling a **5 lakh** fund for events and logistics
  - Managed various events-**IAS panel talk, Blockchain Hackathons** etc. with responsibility of **supervising** entire event
  - Orchestrated work plans to **streamline flow events**, curate **logistics**, handle **event publicity** & track **itinerary progress**
  - Collaborated with experts to judge the event, **Renew EnvironmenD**; Supervised timely **funds allocation** from sponsors

## EXTRA CURRICULAR ACTIVITIES

- **Bachpan Teaching Program:** Volunteered to **support dedicated & underserved learners** with educational assistance
- **Team Head, RDV'23:** Optimized event scheduling, sponsor branding, and coordinated vendors for **70+ events** across **25 venues**
- **Hindi Samiti Comp'23:** Competed in the **Inter-Hostel Chakravyuh** Competition with a team of three against over 250+ participants
- **House Day, Kumaon:** Contributed **creative decoration ideas** for House Days, enhancing **event ambiance** and attendee experience