# Sachin Bahuleyan

GitHub
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# EDUCATION

#### Indian Institute of Technology Mandi

Aug 2022 - May 2024

 $M.\,Tech\,\,Computer\,\,Science$ 

CGPA: 8.25

# **EXPERIENCE**

#### Data Scientist Intern - D2K Technologies | EDA, Statistical Analysis

August 2024 - Present

- Conducted comprehensive EDA on NBFC loan disbursement data for ECL analysis, preparing and cleaning large borrower datasets, and utilizing data visualizations to present insights to senior management.
- Successfully delivered a RAG application POC for client's annual report documents.
- EDA on Gold auction data for customer stress analysis.

## **PROJECTS**

# End to End RAG Based Chatbot | Python, LangChain, FAISS, Flask

**∠**Project Link

- Developed a RAG-based chatbot using the Langchain framework, integrating advanced AI capabilities.
- Implemented sentence embeddings with MiniLM v6 from Hugging Face for efficient text processing.
- Utilized FAISS for vector database retrieval, enhancing search efficiency within the chatbot.
- Built and deployed a Flask web application to showcase the chatbot's functionality.

#### End to End Student Performance Predictor | Python, Flask

**☑**Project Link

- Performed comprehensive EDA to analyze data distribution, outliers, and feature relationships.
- Developed an end-to-end machine learning pipeline for student performance prediction with robust exception handling.
- Trained and evaluated models (Linear Regression, Random Forest, XGBoost), achieving 87% R-squared on the test set. Built and deployed a Flask web app to showcase the prediction model

# Airbnb New User Booking | Python

☑Project Link

- Predicted new users' first booking location to enable Airbnb to deliver personalized content and improve demand forecasting.
- Conducted comprehensive EDA to analyze data distribution, outliers, and feature relationships.
- Trained and evaluated models (Random Forest, Decision Trees, XGBoost), achieving a 0.86 public score on Kaggle.

## Major Project (Final Year Project)

# Reinforced Bot Behavior | Unity 3D, C#, Logitech G29 Driving Wheel, VS Code

May 2024

- Designed and implemented a realistic driving environment within Unity.
- Established seamless integration between the Logitech G29 Driving Wheel and Unity for enhanced agent control.
- Leveraged State-of-the-art Reinforcement learning Proximal Policy Optimization and Imitation Algorithms: Behavior Cloning and Generative Adversarial Imitation Learning
- Effectively trained the agent in a dynamic multi-agent environment, preparing it for complex real-world interactions.

#### SKILLS

Python, C++, SQL, Pytorch, LangChain, Linux, Large language models, Statistics, Machine learning, Deep learning, Data science, NLP, Time Series Forcasting, Git/GitHub, Problem Solving, LATEX

## Coursework

Deep Learning, Advanced Data Structures & Algorithms, Linear Algebra, Probability, Statistical Methods

#### Achievements

# GATE CSE 2020: Achieved 98 percentile