Sachin Bahuleyan

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EDUCATION

Indian Institute of Technology Mandi

M. Tech Computer Science

Aug 2022 - May 2024 *Current CGPA: 8.12*

EXPERIENCE

Data Scientist Intern - D2K Technologies | EDA, Statistical Analysis

August 2024 - Present

- Conducted comprehensive Exploratory Data Analysis (EDA) on NBFC loan disbursement data for ECL (Expected Credit Loss) analysis.
- Prepared and cleaned large datasets containing borrower information, loan statuses, and financial metrics.
- Utilized data visualization tools to present findings and insights to senior management.

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