

# DEBJIT CHATTERJEE

Kolkata, West Bengal

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## SUMMARY

A passionate Full-Stack Developer with hands-on expertise in building scalable, data-driven web applications. Skilled in modern Frontend technologies (React, JavaScript, HTML/CSS) and robust Backends with Python, FastAPI, and Pydantic, I create clean, efficient RESTful APIs. My strong foundation in Data Science and Machine Learning — using Pandas, NumPy, scikit-learn, and NLP pipelines — empowers me to deliver intelligent, high-performance solutions backed by SQL-driven data handling. Always eager to build, learn, and innovate.

## EDUCATION

**Techno Main Salt Lake, Kolkata** 09/2021 – present

B.Tech-Computer Science and Engineering (Data Science) – **CGPA** – **8.03/10.0**

## PROJECTS

### Sentiment-Aware Recommendation System with Demand Forecasting

- Developed a hybrid fashion recommendation engine combining **content-based** and **collaborative filtering** techniques.
- Integrated **sentiment analysis** from user reviews to **compute product sentiment scores** and **enhance ranking relevance**.
- Implemented time-series demand forecasting to optimize inventory and anticipate product demand trends.
- Achieved **93% accuracy** and **94% precision** using **Extra Trees Classifier (ETC)** for sentiment prediction.
- Delivered personalized, context-aware recommendations by leveraging user behavior, product metadata, and review insights.

### Real Time Insurance Premium Prediction API (FastAPI, ML)

- Built a regression-based machine learning model to predict health insurance premiums from demographic and lifestyle features (age, gender, BMI, smoking status, etc.). Achieved **accuracy up to 94%**.
- Developed a scalable **REST API** using **FastAPI** to serve real-time insurance premium predictions with JSON input/output.
- Packaged the solution in **Docker** for seamless deployment across environments.

### GTA VI Concept Landing Page Using React

- A visually rich and animated concept landing page for GTA VI, built using **React.js** and **Vite**.
- This project is designed as a front-end showcase inspired by the aesthetics of the Grand Theft Auto franchise, featuring themed graphics, stylized fonts, and animated elements.

### Advanced EDA using SQL

- A comprehensive collection of **SQL** scripts for data exploration, analytics, and reporting. These scripts cover various analyses such as **database exploration, measures and metrics, time-based trends, cumulative analytics, segmentation**, and more.
- This repository contains SQL queries designed to help data analysts and BI professionals quickly explore, segment, and analyze data within a relational database.
- Each script focuses on a specific analytical theme and demonstrates best practices for SQL queries.

## TECHNICAL SKILLS

**Languages:** Python, C++

**Frontend-Technologies:** HTML, CSS, Tailwind, JavaScript (ES6), React.Js

**Backend-Technologies:** Fast API, Pydantic, API Development

**Databases:** SQL

**Machine Learning:** Machine Learning Algorithms, NLP Pipeline, scikit-learn

**Data Science and Data Analytics Tools:** NumPy, Pandas, Matplotlib, Seaborn,

**Software Development:** Software Development Life Cycle, Data Structures, OOPs, DBMS

**Tools and Environments:** VS Code, Jupyter Notebook, MS SQL Server

## EXTRACURRICULAR

### Smart India Hackathon 2023(SentiNOVA)

Our project focuses on real-time Twitter sentiment analysis using NLP and AI/ML Achievements: Team NOVA excelled in an internal hackathon and secured a spot among 30 teams, out of 300, to represent our college at SIH

### CERTIFICATION

**Crash Course on Python** - (Authorized by Google and offered through Coursera)