GAGANDEEP SINGH

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CAREER HIGHLIGHTS

- **Developed Scalable Data Solutions**: Designed and implemented ETL pipelines and database schemas for cybersecurity threat analysis and student registration systems, ensuring seamless data management and reporting.
- **Proven Machine Learning Expertise**: Delivered 95% model accuracy in predicting airline passenger satisfaction, leveraging decision trees and advanced feature engineering.
- **Advanced Data Visualization**: Built interactive dashboards using **Power BI** and **Tableau** to provide actionable insights for Airbnb metrics and cybersecurity threat trends.
- **Database Design Proficiency**: Modeled relational and NoSQL schemas to optimize data storage and retrieval for retail inventory systems and log data processing.
- **Award-Winning Collaboration**: Contributed to projects that earned **1st Place in Sustainable Development Goals Hackathon (2023)** and **2nd Place in ELA Hackathon (2023)**, focusing on scalable and impactful data-driven solutions.

EXPERIENCE

Data Analyst Intern – Cybersecurity Insights **September 2022 – August 2023**
Right Turn Security Punjab, India

- Designed and implemented **data pipelines** to process real-time log data from intrusion detection systems, ensuring low latency for critical threat reporting.
- Developed **database schemas** to organize and store cybersecurity incident data, enabling seamless querying and efficient reporting.
- Analyzed patterns in historical cybersecurity breaches using **Python (Pandas, Scikit-learn)** to identify high-risk behaviors, contributing to the development of predictive security protocols.
- Collaborated with the team to define **AI/ML standards** for threat detection models, such as anomaly detection and classification of malicious activities.

EDUCATION

Data Science & Machine Learning Diploma **August 2023 – April 2025**
Red River College GPA: 4.361

- Comprehensive coursework in AI and machine learning principles, with hands-on experience in Python and SQL programming.
- Completed practical projects focusing on data analysis, model evaluation, and database management.
- Prepared to apply skills in real-world applications, including dynamic manufacturing environments requiring automated testing solutions.

AWARDS

2nd position holder, ELA Hackathon **November 2023**
Hackworks Winnipeg, Manitoba

Top Applied Research Entry Award **April 2023**
Sustainable Development Goals (SDG) Winnipeg, Manitoba

CERTIFICATIONS

Databases: Advanced Topics in SQL
Stanford Online- 2024

Google Data Analytics
Coursera - 2023

MongoDB Python Developer Path
MongoDB - 2024

Certificate in Python & SQL
GTB Computer Education - 2023

PROJECTS

All the following projects are available in detail along with the data sets here: gdsai4903 (gdsai4903) / Repositories · GitHub

SQL - BoxStore Database Project

Handled data from a box store, including product details like manufacturer, product name, model number, serial number, and price. The project involved data storage, normalization, database creation, data expansion, and visualization using an Entity Relationship Diagram (ERD).

Key Features:

- Stored data using MySQL for efficient handling.
- Normalized data to eliminate redundancy and improve performance.
- Created and populated the database with normalized data.
- Expanded data to simulate realistic scenarios.
- Visualized data relationships with an ERD.
- Technologies Used: MySQL, MS Excel, Draw.io

Link: https://github.com/gdsai4903/SQL-BoxStore

Machine Learning - Airplane Passenger Satisfaction (Python)

The dataset contained survey responses from airline passengers. The objective of the project was to analyze the data to determine the factors contributing to passenger satisfaction and to predict whether a passenger is satisfied based on these factors. This analysis includes data cleaning, exploratory data analysis (EDA), feature engineering, and building machine learning models.

- Two machine learning models were evaluated to predict passenger satisfaction:
- Decision Tree Classifier
- Support Vector Machine (SVM)

Link: https://github.com/gdsai4903/airplane-passenger-satisfaction-prediction

Python – Online Student Portal

Developed a terminal-based student portal in Python with SQLite for data storage. It allows students to register, log in, manage personal details, upload documents, and pay course fees. The portal includes a status tracking system to monitor student progress and sends email notifications upon fee payment.

Key Features:

- User registration and login
- Profile and document management
- Course selection and fee payment
- Status tracking (Unknown, Candidate, Approved, Enrolled)
- Email notifications for offer letters
- Technologies Used: Python, SQLite, Email Service

Link: GitHub - gdsai4903/online_student_portal

Power Bi - Airbnb Dashboard

This project aims to provide a comprehensive overview of Airbnb listings in Winnipeg using interactive visualizations created with Microsoft Power BI. The dashboard allows users to explore the data and gain insights into different trends and patterns. The Power BI dashboard includes the following features:

- Geographical Analysis: Visualize the distribution of Airbnb listings across different neighborhoods in Winnipeg.
- Pricing Insights: Analyze the pricing trends of listings based on room type, property type, and location.
- Availability Trends: Explore the availability of listings throughout the year.
- Review Analysis: Gain insights into the number of reviews and review scores for different listings.
- Interactive Filters: Use interactive filters to drill down into specific data points and customize the visualizations according to your needs.

Link: GitHub - gdsai4903/airbnb-dashboard