**READ ME FILE ( CUSTOMER CHURN PREDICTION)**

**📊 Customer Churn Prediction with Python & SQL**

**Project Overview**

This project predicts customer churn using **Machine Learning (Random Forest)** and **SQL for data storage**. It involves **EDA, feature engineering**, and creating **visualizations** to analyze customer behavior and improve retention strategies.

**Technologies Used**

* **Python** (Pandas, NumPy, Scikit-Learn, Matplotlib, Seaborn)
* **SQL** (For data storage and retrieval)
* **Jupyter Notebook/Google Colab** (For running the project)

**Files in This Repository**

📂 customer\_churn\_prediction.ipynb - Jupyter Notebook with full code 📂 customer\_churn.csv - Dataset 📂 churn\_prediction\_model.pkl - Saved Machine Learning Model 📂 churn\_analysis.db - SQL Database (Optional)

**How to Run the Project**

1. Clone this repository:
2. git clone https://github.com/yourusername/customer-churn-prediction.git
3. Install required libraries:
4. pip install pandas numpy scikit-learn matplotlib seaborn
5. Run the Jupyter Notebook to explore the data and model.

**Results & Insights**

* **Achieved 85% accuracy** using a **Random Forest model**.
* Identified key churn indicators through **feature analysis**.
* Stored and managed customer data using **SQL** for better insights.