DRUG RECOMMENDATION SYSTEM STEPS TO ACHIEVEMENT

• Step 1: Data Acquisition = 🗹

Acquired drug patient interaction dataset (includes patient medical history, symptoms, conditions, and prescribed drugs).

- Step 2: Data Cleaning & Preprocessing = X.
 - o Removed duplicates and irrelevant entries.
 - o Handled missing values (imputation where possible).
 - o Normalized categorical values (gender, condition, drug type).
- Step 3: Data Transformation = **※**.
 - o Encoded categorical variables using One-Hot/Label encoding.
 - o Scaled numerical features like Age, Dosage, and Lab Results.
- Step 4: Dataset Loading = X.

Loaded cleaned dataset into Pandas/SQL environment for exploration and modeling.

- Step 5: Exploratory Data Analysis (EDA) = X.
 - o Distribution plots of drug prescriptions across conditions.
 - o Correlation analysis between patient features and drug recommendation.
- Step 6: Data Modeling = X.
 - Built machine learning models (Logistic Regression, Random Forest, XGBoost)
 to predict most suitable drug.
 - o Compared accuracy, precision, recall, and F1-score.
- Step 7: Data Visualization & Communication = X.
 - Power BI dashboards: drug-condition heatmaps, patient profiles, model prediction trends.

- Step 8: Project Review = X.
 - o Validated model outputs with dataset consistency.
- Step 9: GitHub Upload = 💢.
 - o Uploaded cleaned dataset, code, model, and notebooks.
- Step 10: Task Report Submission = 💢.
 - o Submitted final documentation & visuals.

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@ GitHub: Processing