PROJECT MODULES STATUS UPDATE

Module 1: Data Preparation & Backend Setup

- **Task 1: Dataset Cleaning** (handle missing values, normalize categories) = ❌.

- **Task 2: Feature Engineering** (condition-to-drug mapping, patient history) = ❌.

- **Task 3: Model Input Pipeline** (train/test split, preprocessing pipeline) = ❌.

→ Endpoint 1: Drug Recommendation Service

- **Input**: Patient's medical record (age, condition, symptoms) = ❌.

- **Output**: Suggested drug(s) with confidence score = ❌.

Module 2: Knowledge & Query Processing

- **Task 4: NLP Query Integration**

  o Enable users to ask in natural language, e.g., *"What drug is recommended for hypertension? =* ❌*"*

- **Task 5: Database Integration**

  o Connect to structured medical knowledgebase (DrugBank / WHO dataset) = ❌.

→ Endpoint 2: Query-to-Drug Recommendation

- **Input**: Natural language query.

- **Output**: Drug name(s), dosage range, and explanation.

Module 3: Model Training & Evaluation

- **Task 6: Train ML Models**

  o Compare Logistic Regression, Random Forest, XGBoost, and Neural Nets = ❌.

- **Task 7: Model Evaluation**

  - Use precision, recall, F1-score to evaluate = ❌.

→ Endpoint 3: Predictive Recommendation

- **Input**: Patient structured profile.

- **Output**: Top-N recommended drugs.

Module 4: Frontend & Integration

- **Frontend Page 1:** Patient Form (enter patient details → get drug recommendation) = ❌.

- **Frontend Page 2:** Search Interface (type condition → recommended drug list) = ❌.

- **Frontend Page 3:** Results Visualization (charts, dosage insights) = ❌.

Tech Stack

- **Backend**: Flask / FastAPI = ❌.

- **ML Models**: Scikit-learn, XGBoost, PyTorch (optional) = ❌

- **Database**: SQLite / PostgreSQL (structured data), Pinecone for embeddings or MongoDB = ❌

- **Visualization**: Power BI, Matplotlib, Seaborn = ❌.

- **Frontend**: Flask templates = ❌.

Developer: AanDevAnalyst

📞 **Phone:** 09036259681.

✉ Email: nuhuabduljabbar5@gmail.com

🔗 **GitHub:** *Processing*