Project Planning Map

1. Problem Definition & Research

- Identify key challenges in liver cirrhosis diagnosis.
- Analyse existing diagnostic methods and their limitations.
- Define project objectives and success criteria.

2. Data Collection & Preprocessing

- Gather structured & unstructured medical data (EHR, lab tests, imaging).
- Handle missing values, outliers, and normalize data.
- Feature selection: Identify key biomarkers and relevant attributes.

3. Model Development

- Choose ML algorithms (Random Forest, XGBoost, Neural Networks, etc.).
- Train and validate models using historical patient data.
- Optimize hyperparameters for best performance.

4. Model Evaluation & Validation

- Measure performance using metrics: Accuracy, Precision, Recall, F1-score, AUC-ROC.
- Compare multiple models to select the best one.
- Interpret feature importance for explainability.

5. Continuous Monitoring & Updates

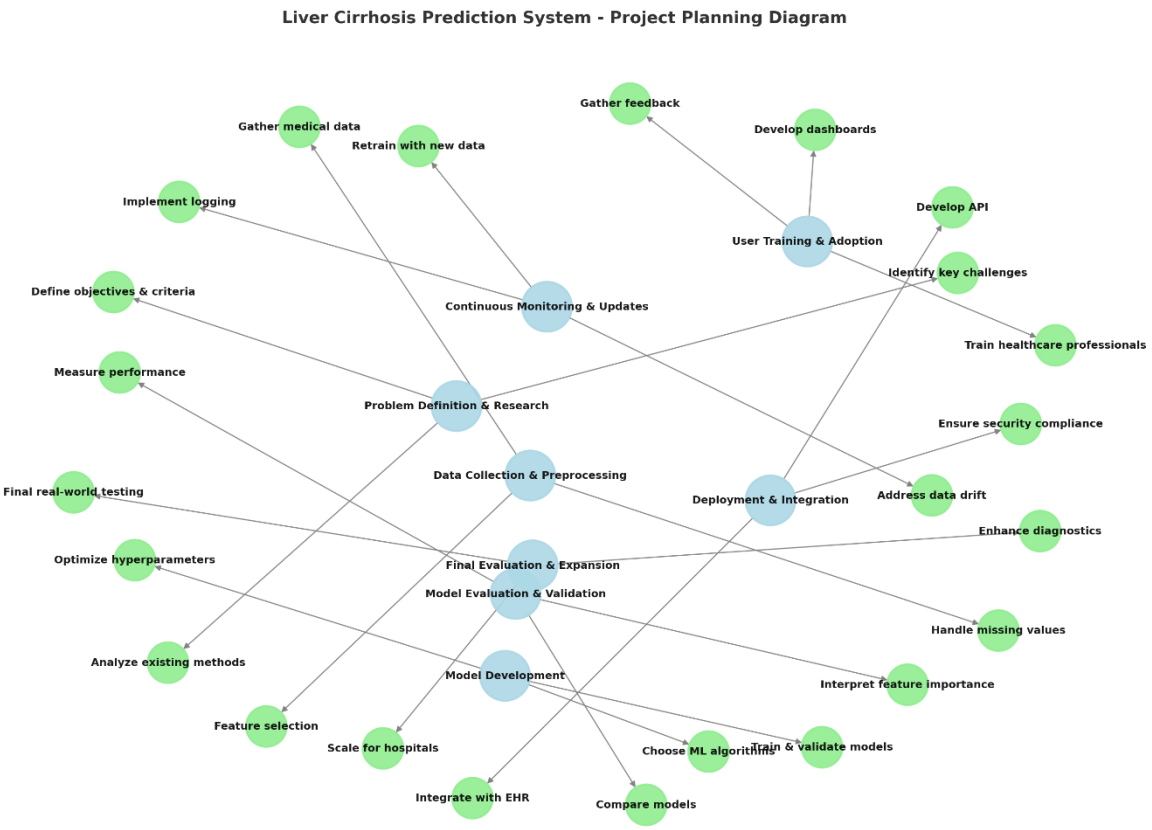
- Implement logging & performance tracking.
- Periodically retrain model with new patient data.
- Address data drift and improve prediction accuracy.

7. User Training & Adoption

- Provide training to healthcare professionals.
- Develop user-friendly dashboards for easy interpretation.
- Gather feedback for iterative improvements.

8. Final Evaluation & Expansion

- Conduct final testing with real-world patient data.
- Scale the system for broader adoption in hospitals.
- Explore additional predictive features for enhanced diagnostics.


Liver Cirrhosis Prediction System - Project Planning Diagram
Gather feedback
Develop dashboards
Gather medical data
Retrain with new data
Implement logging
Develop API
User Training & Adoption
Identify key challenges
Define objectives & criteria
Continuous Monitoring & Updates
Train healthcare professionals
Measure performance
Problem Definition & Research
Ensure security compliance
Data Collection & Preprocessing
Final real-world testing
Deployment & Integration
Address data drift
Enhance diagnostics
Optimize hyperparameters
Final Evaluation & Expansion
Model Evaluation & Validation
Handle missing values
Analyze existing methods
Model Development
Interpret feature importance
Feature selection
Scale for hospitals
Choose ML algorithms
Train & validate models
Integrate with EHR
Compare models