State diagram

Login → [Uploading Medical Data] →

Uploading Medical Data
Entry/ System loads data upload interface.
Do/Doctor selects and submits patient data.
Exit/ System validates data format.

[invalid data]

[valid data]

Waiting for Prediction
Entry/ System starts processing data.
Do/ AI model predicts lung cancer likelihood.
Exit/ System generates a diagnosis report.

[Receiving Report]

Receiving Diagnosis Report
Entry/ System displays the diagnosis result.
Do/ Doctor reviews the report.

Reviewing Report
Entry/ System enables feedback submission.
Do/ Doctor assesses prediction accuracy.
Exit/ Doctor decides whether to submit feedback or request further analysis.

[Request Another Analysis]

[Submit feedback]

Providing Feedback
Do/ Doctor submits comments on prediction quality.
Exit/ System logs feedback for learning.

Login

Accessing System Dashboard
Entry/ System loads the developer dashboard.
Do/ Developer selects an operation.
Exit/ System redirects to the selected operation.

[Updating script]

Retraining AI Model
Entry/ System prepares new training cycles.
Do/ Developer adjusts parameters and re-trains the model.

Updating Data Validation Script
Entry/ System loads script editor.
Do/ Developer modifies the script to enhance data validation rules.
Exit/ System saves and applies the updated script.

Monitoring Model Performance.
Entry/ System tracks model accuracy, loss, and errors.
Do/ Developer analyzes training logs.

Deploying Script for Validation
Entry/ System runs the updated script on test data.
Do/ Developer monitors execution results.

[issues found]

[model good]

[Success]

[Error]

Deploying Model
Entry/ System checks model readiness.
Do/ Developer pushes the updated model to production.
Exit/ System starts using the new model for predictions.

Maintaining System & Monitoring
Entry/ System logs performance and user interactions.
Do/ Developer fixes bugs, updates security patches, and optimizes performance.
Exit/ System remains stable for usage.