Data Sources

(EHR) (Claims Data) (Laboratory Results) (Medical Devices) (Patient Demographic)

Data Integration layer

(ETL Pipeline)

(Data Validation)

(Data standardization)

(Data lake)

Processing layer

(Stream Processing)   (Batch Processing)

(ML Pipeline)

(Feature store)

Analytics layer

(Risk Scoring Engine) (Predictive Models) (Statistical Analysis)

(Alert Generation)

Presentation layer

(REST APIs) (Analytics Dashboard) (Automated reports) (Notification systems)