Risk Stratification

Patient Population

Feature Engineering
- Demographics
- Comorbidities
- Labs & Vitals

Risk Model
Logistic Regression
Random Forest
Deep Learning

Risk Groups
- High Risk
- Medium
- Low Risk

Clinical Action
- Intensive monitoring
- Preventive intervention

Model Monitoring & Update
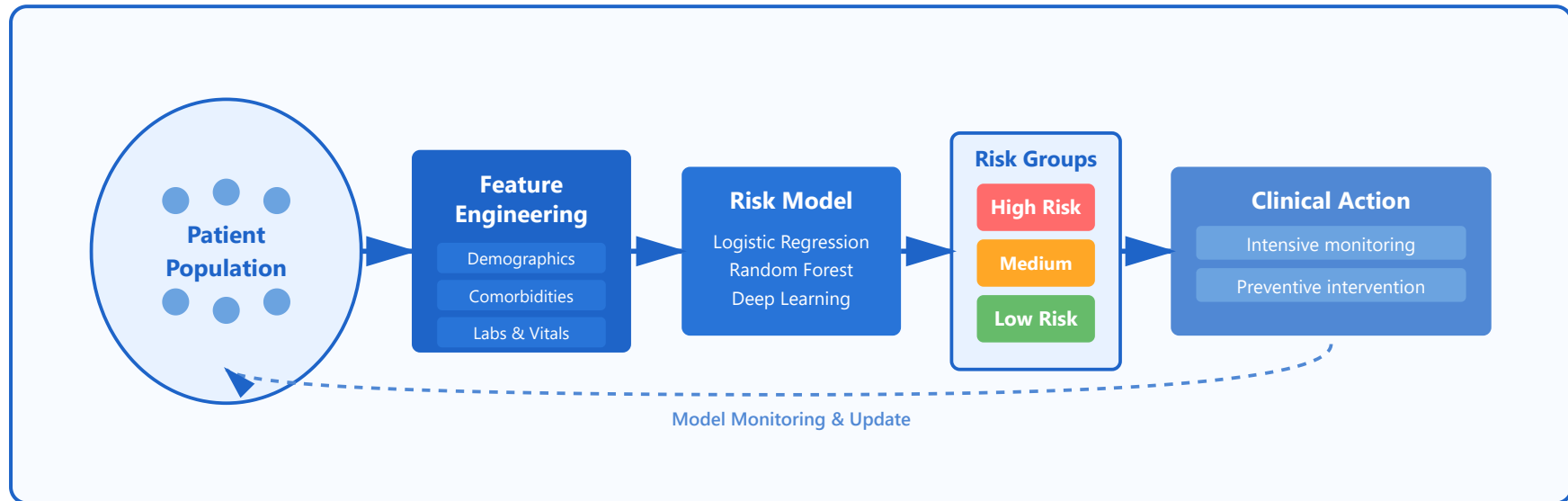
📊 Clinical Risk Scores

- CHADS-VASc (stroke risk)
- MELD (liver disease)
- GRACE (cardiac events)
- Point-based scoring systems

🤖 Model Development

- Logistic regression
- Cox proportional hazards
- Gradient boosting machines
- Neural networks

🔧 Feature Engineering

📈 Calibration & Implementation

- Aggregating encounter data
- Temporal patterns
- Medication burden scores
- Comorbidity indices (Charlson, Elixhauser)

- Calibration plots
- Decision curve analysis
- Integration into EHR alerts
- Continuous model monitoring