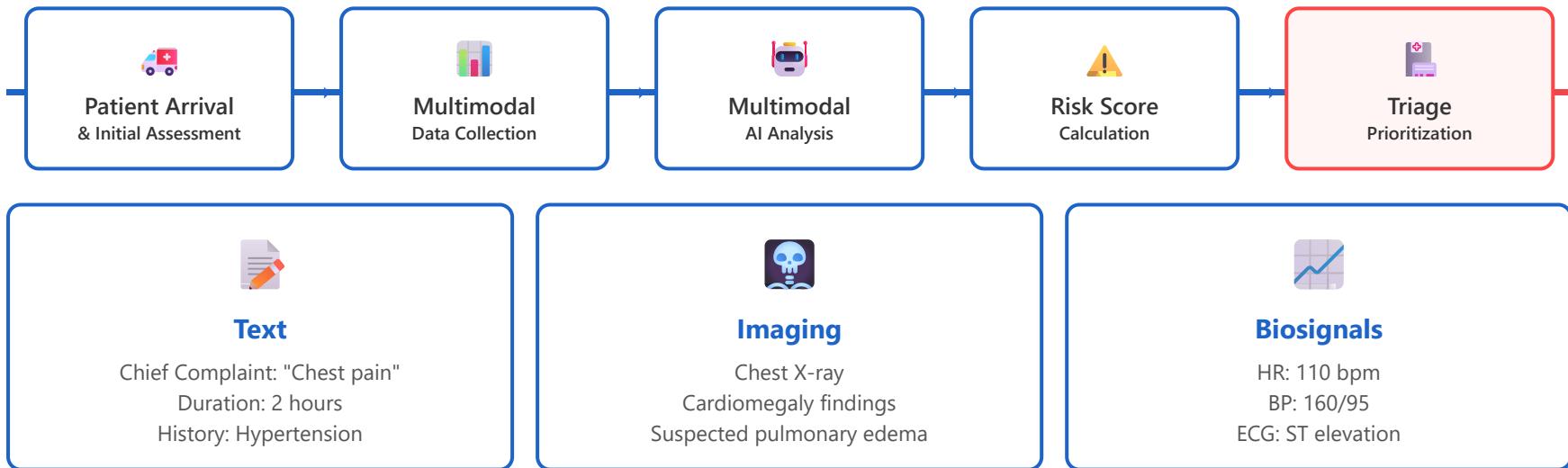# Case Study: Emergency Room Multimodal Triage

Integrating text (complaints), images (X-ray), and biosignals (ECG, BP) in the emergency room to determine triage priority

| Patient Arrival & Initial Assessment | Multimodal Data Collection | Multimodal AI Analysis | Risk Score Calculation | Triage Prioritization |

Text
Chief Complaint: "Chest pain"
Duration: 2 hours
History: Hypertension

Imaging
Chest X-ray
Cardiomegaly findings
Suspected pulmonary edema

Biosignals
HR: 110 bpm
BP: 160/95
ECG: ST elevation

Integrated Analysis Results URGENT

▸ **Predicted Diagnosis:** High probability of acute myocardial infarction (87% confidence)

▸ **Risk Score:** 9/10 (Urgent)

▸ **Recommended Action:** Immediate cardiology consultation, prepare for emergency cardiac catheterization

▸ **Processing Time:** 3 seconds (real-time support)