# Project Plan: TriagePro (24-Hour Version)

## 1. Overview

TriagePro is a web application in the healthcare domain designed to intelligently prioritize patient cases and route them to the appropriate medical department using a simple AI-based triage system.  
The system will allow patients to enter their symptoms, receive a triage classification (Low, Medium, High), see suggested departments, and book appointments.  
A professional dashboard will display key metrics and patient logs in visually appealing charts and tables.

## 2. Technology Stack

- Frontend: Next.js (React) with Tailwind CSS or Material UI for sleek UI components and charts.  
- Backend: Spring Boot (Java) REST API connected to MySQL.  
- AI Component: Python (Flask/FastAPI) microservice returning dummy predictions.  
- Database: MySQL to store users, symptoms, triage logs, appointments.

## 3. Key Features

- Patient symptom input form.  
- AI microservice predicts triage urgency and suggests medical department.  
- Appointment booking with pre-defined doctors and available slots.  
- MySQL stores patients, triage logs, and appointments.  
- Professional dashboard showing:  
 - Triage logs in a searchable/filterable table.  
 - Pie chart of triage level distribution.  
 - Bar chart of department case counts.

## 4. Database Design (MySQL)

Tables:  
- users (id, name, email, role, password\_hash)  
- triage\_logs (id, user\_id, symptoms, predicted\_department, triage\_level, created\_at)  
- appointments (id, doctor\_id, patient\_id, appointment\_time, status)  
  
Dummy doctor data and slots will be seeded.

## 5. AI Component

- Simple Python microservice that takes symptoms as input and returns:  
 {  
 "department": "Cardiology",  
 "triage\_level": "HIGH"  
 }  
- Hardcoded rules or dummy ML logic to save development time.

## 6. Estimated Time Allocation (~24 hours)

- Spring Boot + MySQL setup: ~3 hrs  
- Next.js setup and routing: ~2 hrs  
- AI dummy service: ~2 hrs  
- Symptom input + triage flow: ~4 hrs  
- Appointment booking flow: ~3 hrs  
- Dashboard with tables and charts: ~4 hrs  
- UI polish with icons/cards: ~4 hrs  
- Testing & minor fixes: ~2 hrs

## 7. Future Enhancements

- Replace dummy AI with a trained ML model.  
- Email notifications for appointments.  
- More advanced filtering and exporting reports.  
- Authentication with JWT and user dashboards.

## 8. Professional Branding

The name "TriagePro" was chosen for its professional, clinical connotation, clearly indicating a medical workflow optimization platform that can be marketed to clinics and hospitals.