TEAM 23

Vital Intake Triage Assistant (VITA)

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Project Overview

- VITA (Vital-Intake & Triage Assistant) is an autonomous mobile robot that rapidly measures key vital signs—heart rate, blood pressure, and temperature—and sends results directly to hospital systems. It is designed to ease nurse workload, improve triage speed, and provide accurate, standardized screening in busy Saudi healthcare facilities.

Problem Statement

- Saudi hospitals face long intake delays because nurses must manually measure vital signs for every patient, leading to average visit times of 2–3 hours. This bottleneck increases health risks for high-risk patients, especially those with cardiovascular disease, and contributes to nurse burnout and staffing pressure.

VITA Solution

- VITA is an autonomous mobile robot that guides patients through check-in, captures vital signs using integrated sensors, and calculates an urgency score in real time to support faster, more accurate triage. The robot integrates with hospital IT systems to deliver real-time results to nurses and doctors, enabling faster triage and prioritization of critical cases.

Key Benefits

- Cuts intake time by completing a full checkup in under 5 minutes and operating autonomously for an 8-hour shift.
- Improves patient safety through accurate vital measurements, urgency scoring, and high critical-case detection accuracy.
- Reduces nurse workload and overtime by automating routine vital checks, while remaining cost-effective and scalable for hospitals and clinics.