HealthAI - Data Flow Diagram

This document provides a high-level overview of the Data Flow Diagram (DFD) for the HealthAI system. This version of HealthAI focuses on preventive health monitoring, smart diagnostics, and real-time alerting. Below is the updated overview of the data flow between users, system components, and databases.

◇ External Entities

User (Patient or Caregiver)
Healthcare Professional
Emergency Service

⟳ Processes

1. User Registration & Authentication
→ Users sign up or log in with personal and medical details
→ Stored in User Credentials DB

2. Vital Data Input (Manual or Wearable Devices)
→ Users or devices submit vitals (BP, heart rate, glucose, etc.)

3. AI Monitoring Engine
→ Analyzes health data in real time
→ Detects anomalies or trends

4. Smart Diagnostic Suggestion
→ Recommends early warnings or health tests

5. Alert System
→ Sends emergency alerts to caregivers/doctors if critical values are detected

6. Health Report Generation
→ Provides periodic reports & stores in history

🖿 Data Stores

User Credentials Database
Health Metrics Store (NoSQL)
Diagnosis Logs
Alert History Archive
Report Repository

🔁 Data Flows

Registration/Login → Stored in User DB
Vitals Data (from user/device) → → Passed to AI Engine
AI Output → Sent to user & stored in Diagnosis Logs
Critical values → Trigger Emergency Alerts
Reports → Generated & stored in Report DB
Doctor feedback → Stored in Logs

Diagram:

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