

# Lab Report Intelligence Agent

Presented By:  
**Byte Builders**

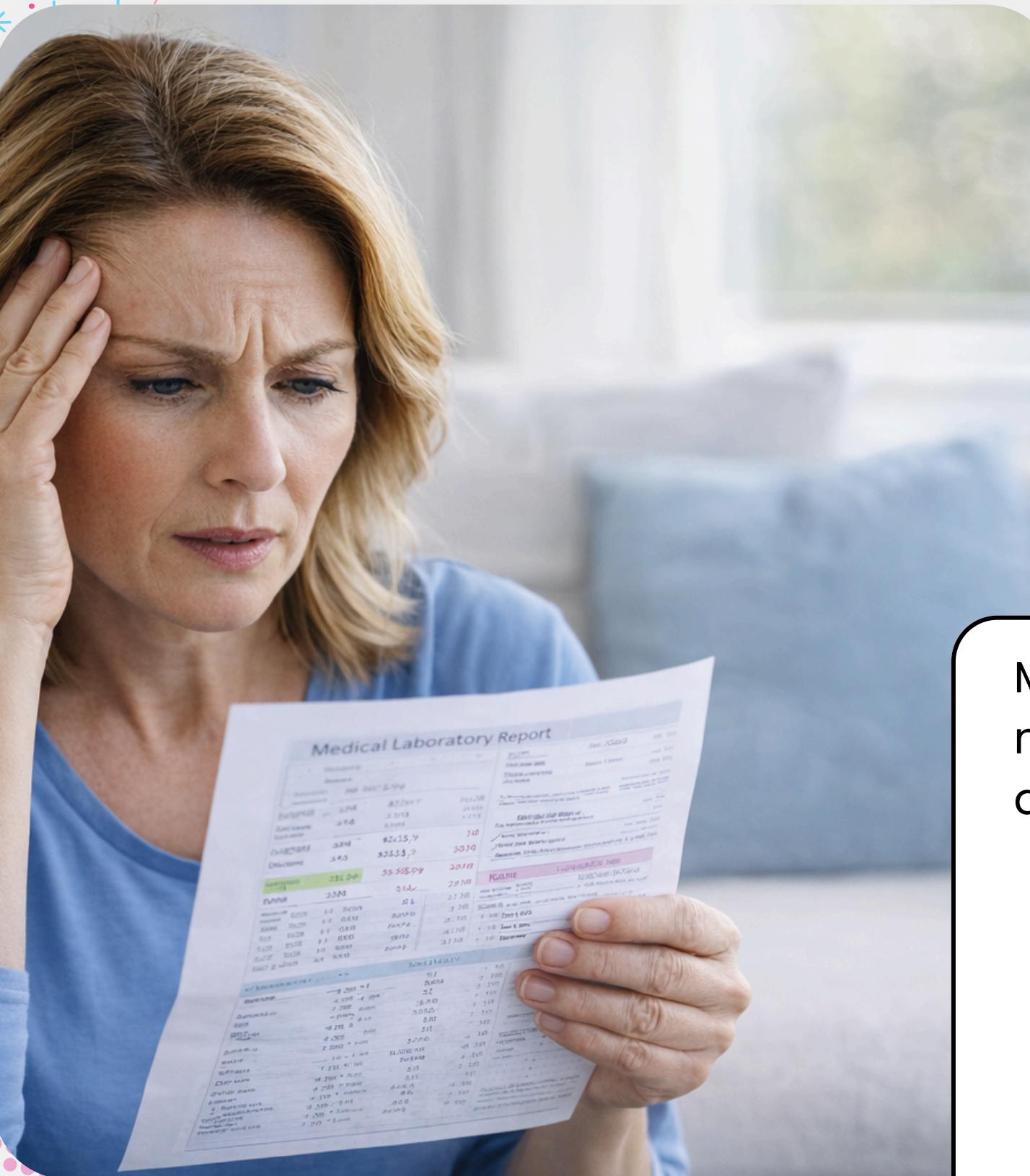


# Abstract

Lab Report Intelligence Agent is an AI-based healthcare application designed to simplify complex medical laboratory reports for patients. The system allows users to upload their lab reports, automatically analyzes medical values, and converts technical data into clear and easy-to-understand health insights.

By providing simplified explanations, health scores, and recommendations, the application reduces confusion and helps users better understand their health condition. The goal of this project is to bridge the gap between medical data and patient understanding through an intuitive, app-based experience.





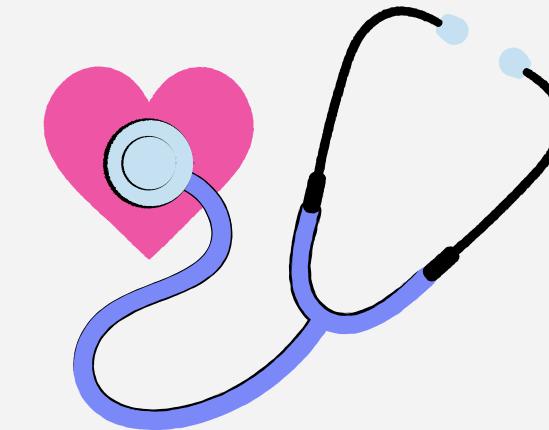
# Problem Statement

Medical laboratory reports contain complex medical terminology and numerical values that are difficult for patients to interpret.

- Reports provide raw data without explanations
- Patients cannot easily identify abnormal results
- Lack of clarity causes confusion and anxiety
- Dependence on doctors for basic understanding



# Our Solution



Converts complex lab reports into simple explanations



Automatically analyzes medical values and detects abnormalities



Generates health score and personalized health insights



Provides easy recommendations to improve health understanding





## Smart Report Analysis

Automatically analyzes lab reports and identifies abnormal health values.



## AI Health Summary

Converts complex medical data into simple, easy-to-understand explanations.



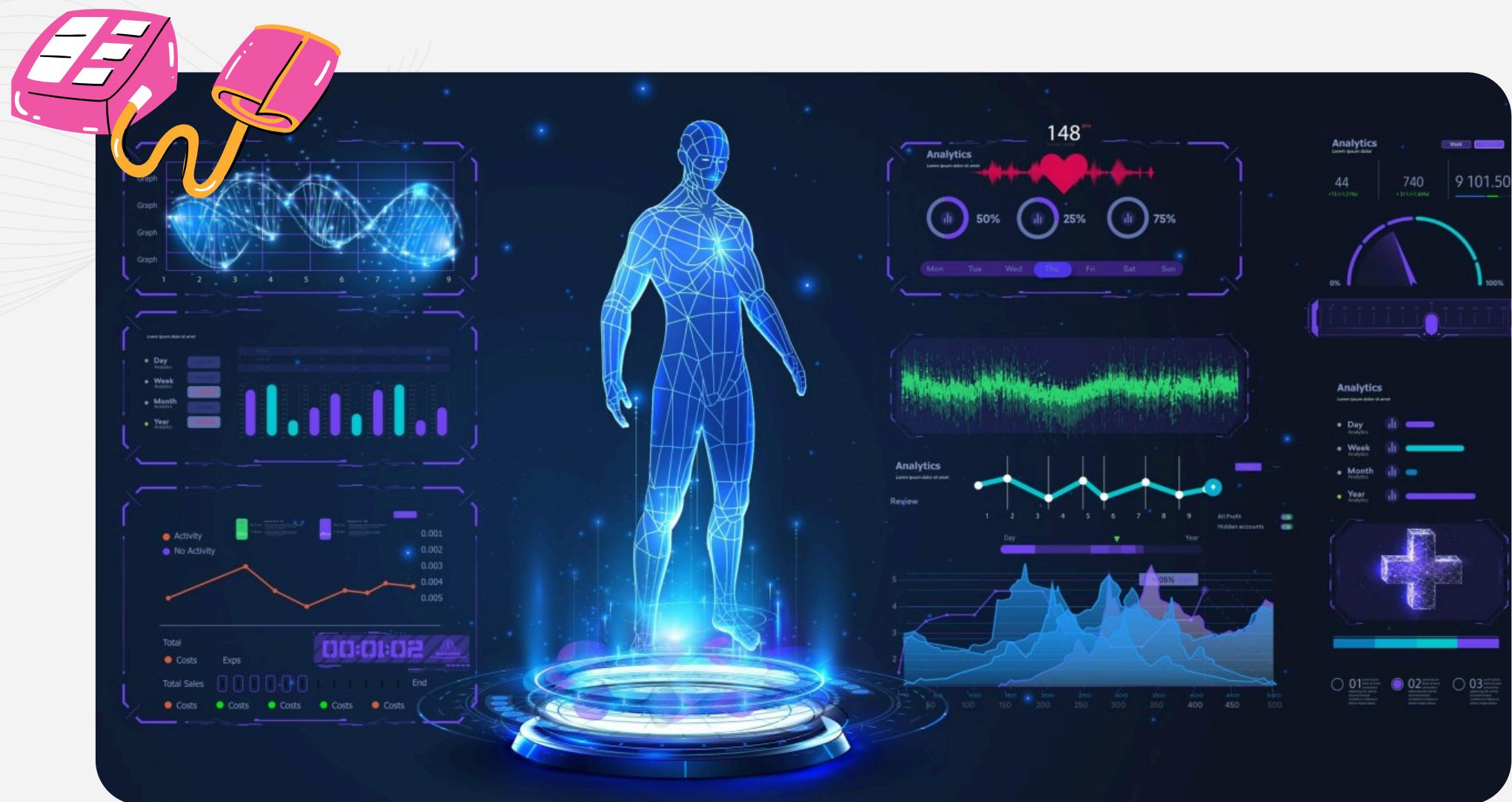
## Health Score Generation

Provides an overall health score based on medical parameters.



## Health Recommendations

Suggests lifestyle improvements and guidance for better health management.



# KEY FEATURES



# Languages & Technologies Used



**Programming Language**  
Python is used for core application logic and data processing.



**Data Processing**  
Pandas is used for analyzing and handling medical data.



**User Interface**  
Streamlit is used to build an interactive web-based dashboard.



**AI & Report Analysis**  
PDF parsing and AI concepts generate health insights.

# System Architecture Diagram

Lab Report Intelligence Agent - System

