

Medical AI Assistant

Project Documentation

1. Introduction

Project Title:

Medical AI Assistant

Team Members:

- Team Leader: JAGADESH K
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- Team Member: KARAN J.S
- Team Member: KARTHICK V

2. Project Overview

Purpose:

The purpose of the Medical AI Assistant is to empower users by providing an interactive, AI-driven interface that helps users analyze symptoms and explore possible medical conditions and treatment plans. While it is designed for informational purposes only, it aims to assist users by simulating diagnostic suggestions and personalized care tips.

Features:

- Conversational Interface: Allows users to input symptoms and medical conditions in plain text to receive suggestions.
- Disease Prediction: Simulates possible conditions based on user input and provides recommendations.
- Treatment Plans: Offers basic advice on managing conditions based on age, gender, and medical history.
- Tabbed Navigation: Enables users to switch between sections easily.
- Responsive Design: Optimized for mobile and desktop screens.
- Disclaimer Section: Informs users that the assistant is for informational purposes and recommends consulting healthcare professionals.

3. Architecture

Frontend (HTML, CSS, JavaScript):

Built with modern web technologies offering a responsive layout and interactivity.

Backend:

Currently static but designed for API integration for real-time analysis.

Accessibility Features:

Semantic tags, keyboard navigation, clear instructions, and optimized contrast ratios.

4. Setup Instructions

Prerequisites:

- Modern web browser
- No installation required for demo
- Backend APIs for full functionality

Running the Project:

1. Download or clone files.
2. Open 'index.html' in your browser.
3. Explore the Disease Prediction and Treatment Plan sections.
4. Input symptoms or conditions to see placeholder outputs.

5. Folder Structure

medical-ai-assistant/

- index.html: Main UI file
- css/: Additional styles
- js/: Additional scripts
- images/: Icons and visuals
- README.md: Documentation
- assets/: Supporting files

6. User Interface

A header with title and disclaimer, tabbed navigation, responsive forms, output areas, and footer badges.

7. API Documentation

Endpoints:

- /analyze-symptoms (POST): Returns possible conditions
- /generate-plan (POST): Provides treatment plan
- /feedback (POST): Collects user feedback
- /login (POST): Handles authentication

8. Authentication

Currently open for demo; production requires JWT, OAuth 2.0, and role-based access with HIPAA compliance.

9. User Interface (Detailed)

Minimalist, intuitive design prioritizing accessibility with navigation, summaries, forms, and reports.

10. Testing

Manual, input validation, accessibility, and future API testing to ensure reliability.

11. Known Issues

No backend connection, placeholder outputs, and lack of authentication; improvements planned.

12. Future Enhancements

API integration, security, animations, multilingual support, and voice interaction.

13. Screenshots

To be added after running the application.