DAYANANDA SAGAR COLLEGE OF ENGINEERING

Shavige Malleshwara Hills, Kumaraswamy Layout, Bengaluru-560078
(An Autonomous Institution affiliated to VTU, Belagavi)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

22CS66 6th Sem Mini-Project Synopsis

DEPARTMENT	Computer Science and Engineering			
TITLE OF THE PROJECT	Unified Disease Prediction			
STUDENT NAMES/ USN/ PHONE/ MAIL ID	Divyam Saini	Krish Dipesh Makadia	Madhab Patwari	
	1DS22CS079	1DS22CS110	1DS22CS113	
	7726877788	8767196678	7002290400	
	divyamsaini1408@gmail.com	krishmakadia2004@gmail.com	madhab2101patwari@gmail.com	
PROJECT GUIDE	Prof. Anitha M Assistant Professor M. Tech,(Ph.D.)			
PROJECT - DOMAIN	AIML			
PROJECT PROBLEM STATEMENT	Early and accurate diagnosis of diseases is critical for effective treatment and management. However, limited access to healthcare professionals and diagnostic facilities can delay this process, particularly in resource-constrained settings. There is a need for a tool that can assist individuals and healthcare providers in preliminary disease detection based on input symptoms. **Key Challenges:** • Lack of accessible diagnostic tools for rural and remote areas. • High dependency on healthcare professionals for preliminary diagnoses. • Risk of misdiagnosis due to overlapping symptoms among multiple diseases.			
PROPOSED SOLUTION	Develop a web-based **Multiple Disease Prediction System** that uses machine learning models to predict the likelihood of various diseases based on user input symptoms. **Steps in the Solution:** 1. **Data Collection and Preprocessing:** Gather datasets for diseases such as diabetes, heart disease, and Parkinson's disease. Clean and preprocess the data for training machine learning models. 2. **Model Development:** Train and optimize machine learning models for each disease. For example, logistic regression for binary classification or support vector machines for high-dimensional data.			

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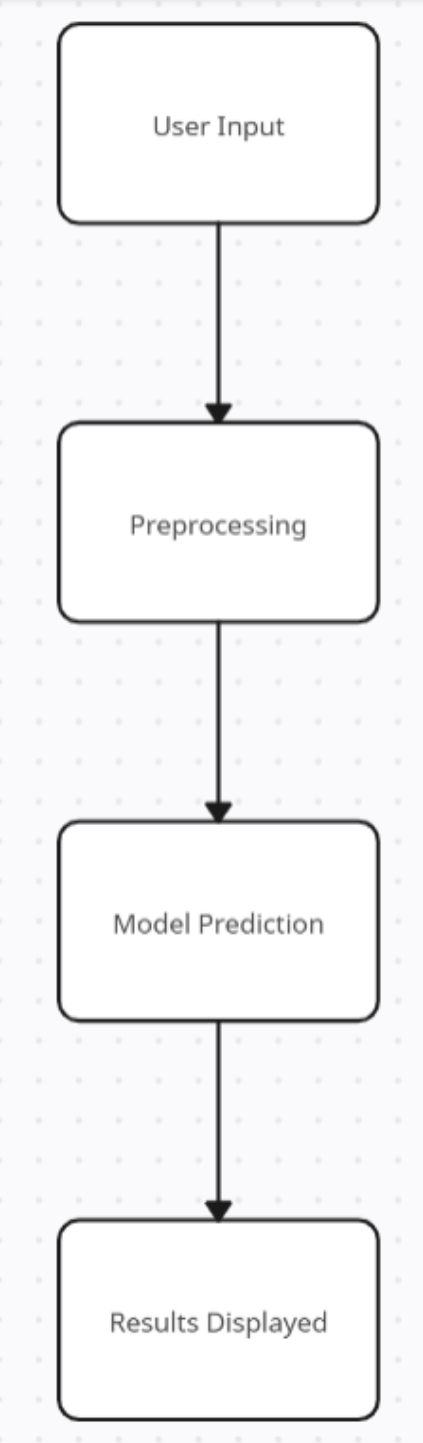
3. **Integration with Web Application:** Use Streamlit to create an interactive web application where users can input their health parameters (e.g., glucose levels, BMI) and receive predictions.
4. **User Interface:** Design a simple and user-friendly interface to facilitate easy interaction for non-technical users.



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PLATFORM THAT WILL BE USED FOR IMPLEMENTATION (Name the hardware and Software tools and Development Environment that you will be using for implementation)	Programming Language : Python Frameworks and Libraries: -Streamlit: For creating the web application. -Scikit-learn: For machine learning model development. -Pandas & NumPy: For data manipulation. Platform Used: - VS code - Google Collab
REFERENCES	[1]https://www.ije.ir/article_169090.html [2]https://www.researchgate.net/publication/381859583_Machine_Learning_for_the_Multiple_Disease_Prediction_System [3]https://www.sciencedirect.com/science/article/abs/pii/S0010482521004662