Medical Diagnosis using AI

Presented By:
Thumma Akhila

Guided By: Saomya Chaudhury

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Problem Statement

- This project aims to provide early and easy diagnosis of diseases such as Breast cancer, PCOS, Thyroid and Heart diseases which is crucial for timely treatment and improved patient outcomes .

- However, traditional diagnostic methods can be time-consuming, expensive, and prone to human error.

- This project aims to develop an AI-powered medical diagnosis system that leverages Machine learning models to predict the presence of diseases based on patient data. By analyzing key medical parameters, the system will assist healthcare professionals in making faster and more reliable diagnostic decisions.

Proposed Solution

- In this modern world, technology has become a replacement of some manually works and a necessary tool for solving problem.

- That is why in medical field "Medical Diagnosis Using AI" is very significant nowadays.

- This system design is for Doctors to diagnose diseases easily and accurately.

- Thus, "Medical Diagnosis Using AI" is going to be develop to reduce the problem of human errors and delayed detection of diseases.

- This system will focus on diagnosing Breast cancer, PCOS, Thyroid and Heart diseases.

Software Requirements

Frontend :

- Streamlit

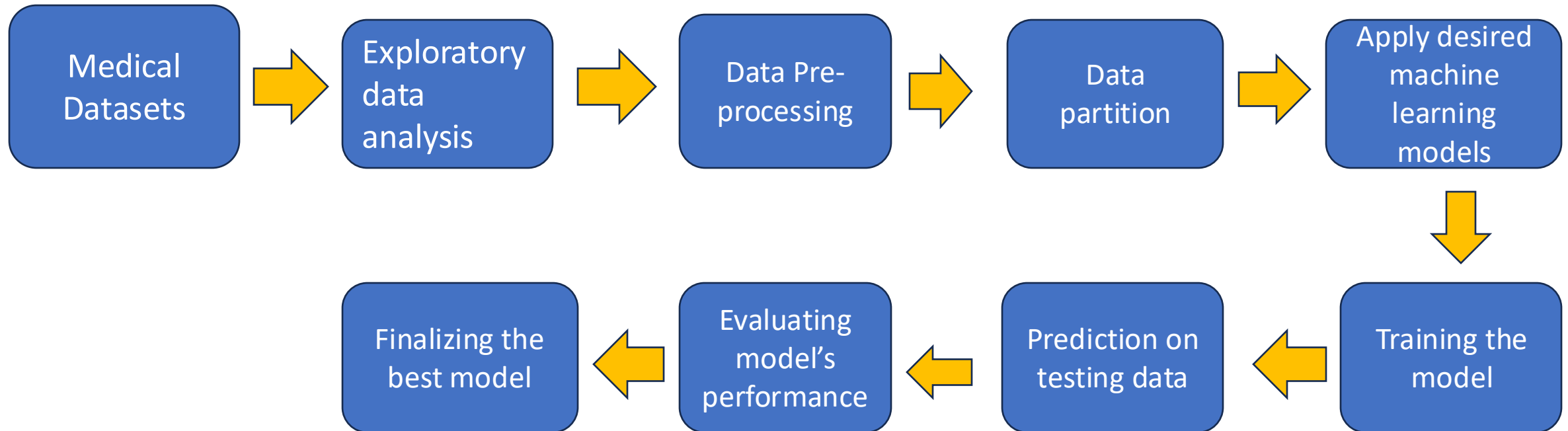**Backend** :

- Python

Model:

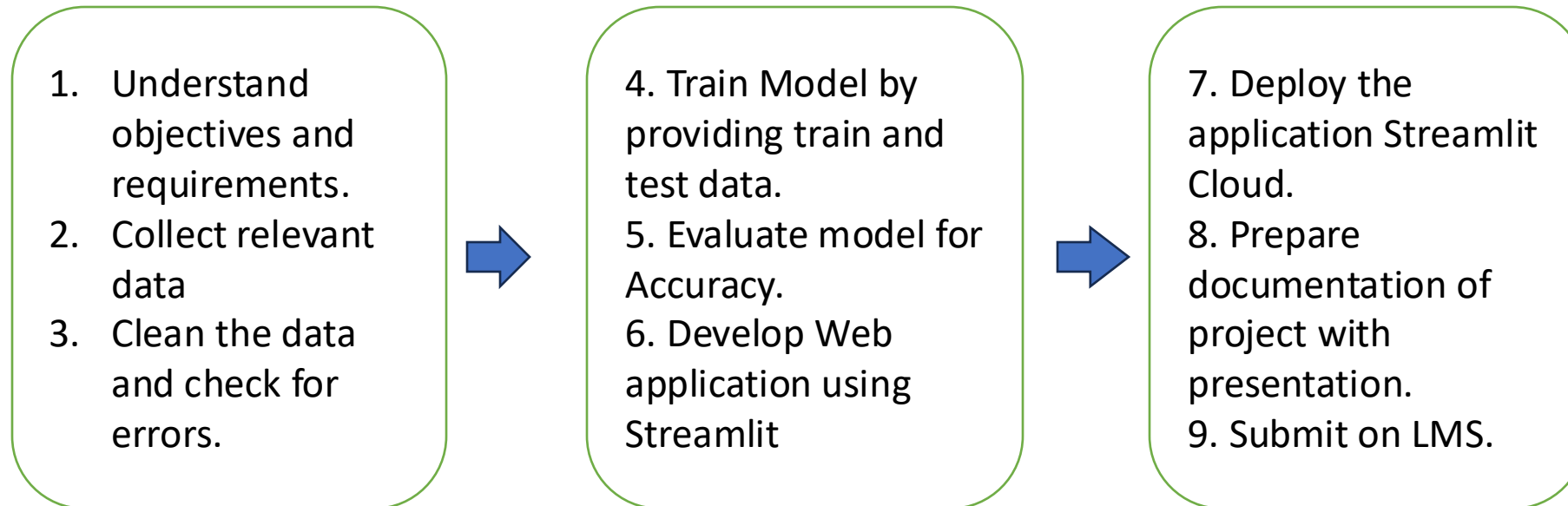- SVM, Logistic Regression

Framework:

- Sklearn

Deployment:

- Deployment using Streamlit cloud.

System Architecture

Project Plan

.Project can be completed in 3 phases given as below -

1. Understand objectives and requirements. 2. Collect relevant data 3. Clean the data and check for errors.	4. Train Model by providing train and test data. 5. Evaluate model for Accuracy. 6. Develop Web application using Streamlit	7. Deploy the application Streamlit Cloud. 8. Prepare documentation of project with presentation. 9. Submit on LMS.

Video of the project

- https://drive.google.com/file/d/1OM16zOZFnyyc8c3Wks4hARS4eoaAhW3T/view?usp=drivesdk

Future Scope

- **Expansion to more Diseases:** Extend coverage to neurological disorders and cancers.

- **Ai chatbot for patient assistance:** Provide instant medical advice.

- **Image based diagnosis:** We can integrate image-based diagnosis using deep learning models like CNN for more advanced medical imaging analysis.

Conclusion

- The AI-powered medical diagnosis system is a revolutionary step in healthcare, leveraging advanced machine learning models to predict diseases accurately and efficiently.

- By integrating AI into medical diagnosis, we can:

- Improve early detection of diseases like Heart Disease, Breast Cancer, PCOS, and Thyroid Disorders.

- Enhance diagnostic accuracy, reducing human error.

- Enable faster decision-making for healthcare professionals.

- Provide cost-effective and accessible medical solutions.

- Together, AI and healthcare can save lives and build a healthier world!

Thank You