

Medical Recommendation System

Presented By:
Sharada Luitel
Krish Kumar Shrestha

Contents

- Introduction
- Problem
- Objective
- Methodology
- Scope
- Requirements
- Algorithms
- Expected outcome

Introduction

There is an increased use of technology in the healthcare sector from wearables, prescription suggesting tools, etc. They decrease the occurrence of human mistakes and the amount of mental burden on the healthcare staff and provide more precise and personalized treatment.

Problem

- Limited Access to Healthcare personnels
- Shortage of Qualified Practitioners
- Urban-Rural Disparity
- Economic Diversity

Objective

- Enhance Prescribing Accuracy
- Improve Patient Safety
- Support Resource-Limited Areas
- Increase Treatment Efficiency

Methodology(Feasibility study)

Technical Feasibility

The technical feasibility to develop a recommendation system that matches the medicine that can be prescribed for patients using Python, Django and machine learning is possible.

Methodology

Operational Feasibility

- Documentation & Community
- Developer Expertise
- User Training
- User-Friendly
- Maintenance
- Stability

scope

- Medicine suggestion
- Diet suggestion
- Workout suggestion
- Provide Precaution

limitation

- Limited symptoms and disease
- Data quality and availability
- User input

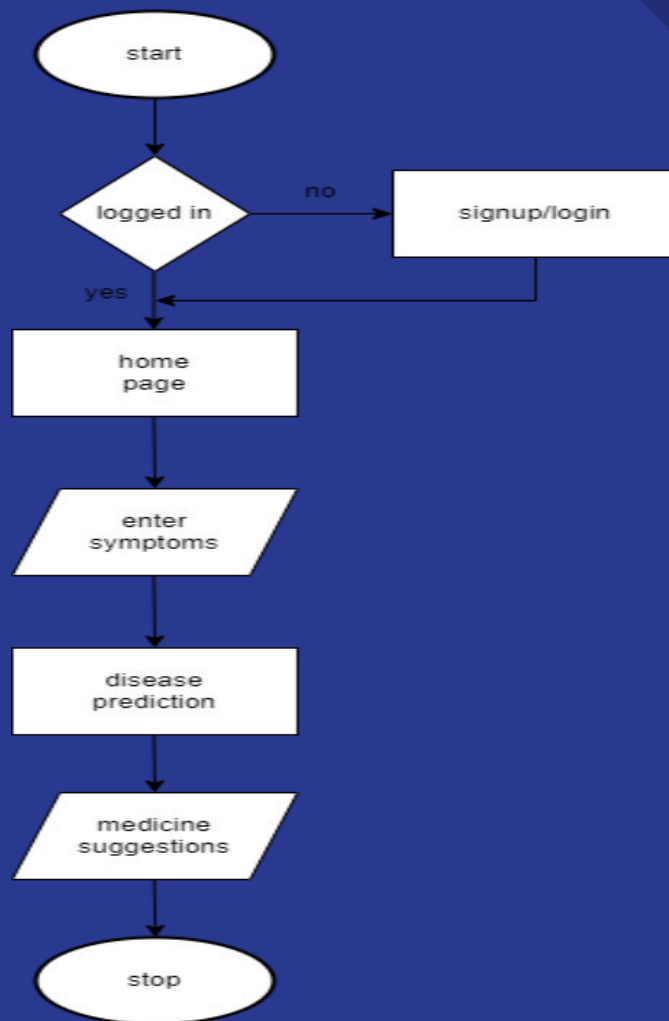
Functional Requirements

- User registration and authentication
- Login option for the registered user
- Search for symptoms
- Get suggestions according to the outcome

Non-Functional Requirements

- Easy to navigate user interface
- Reliable and quick responses
- Work on every device

Flowchart



Algorithms

- Support Vector Classifier
- Random forest
- K nearest Neighbor
- MultinomialNB

Support vector classification

Support Vector Classification (SVC) is a machine learning algorithm used for binary and multi-class classification tasks. It works by finding the optimal hyperplane that maximizes the margin between different classes in the feature space.

Hyperplane: Finds the optimal boundary (hyperplane) that separates classes in the feature space.

Support Vectors: Data points closest to the hyperplane, crucial for determining the boundary.

Margin: Maximizes the distance between the hyperplane and the support vectors.

Dataset

Source:

Medicine recommendation dataset available on Kaggle.

["https://www.kaggle.com/datasets/noorsaeed/medicine-recommendation-system-dataset/data"](https://www.kaggle.com/datasets/noorsaeed/medicine-recommendation-system-dataset/data)

Content:

Symptoms: 132 symptoms

Diseases: 41 diseases

Expected outcomes

- Improved Prescription Accuracy
- Personalized Medication Recommendations
- Enhanced Patient Safety
- Cost Savings



Thank You !!!