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NAME OF THE PROJECT: Disease Prediction System

BATCH: BCA -2021

RESOURCE PERSON: Mr. Bhabani S. Sahoo

MEMBERS: Vivekananda Sahu , Subodha Ku. Sahu , S.K Akil

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Contents

<u>Introduction</u>:

- Addressing the critical need for timely disease detection in healthcare, our Disease Prediction System employs advanced algorithms, including Naive Bayesian, Decision Tree, and K-Nearest Neighbours, RandomForest.

- The Disease Prediction System aims to revolutionize disease detection by providing an accurate and user-friendly tool for early diagnosis based on specific symptoms.

- With a user-friendly interface, seamless healthcare integration, and a commitment to data privacy, our system aims to revolutionize early diagnosis for improved patient outcomes.

Objectives

The primary objectives include:

- Accurate disease prediction:

  Ensure precise and reliable disease predictions by employing advanced algorithms and incorporating up-to-date medical data for enhanced diagnostic accuracy.

- User-friendly interface:

  Design an intuitive and accessible interface to facilitate seamless interaction, making the platform easily navigable for both healthcare professionals and users.

- Scalability for future expansion:

  Build a flexible infrastructure that can accommodate future growth and evolving healthcare needs, allowing for the integration of new features and expanded capabilities.

- Integration with healthcare systems:

  Establish seamless interoperability with existing healthcare systems to streamline information exchange, enabling a cohesive and integrated approach to patient care.

Algorithm Design:

The underlying algorithms used are:

- Naive Bayesian Method

- Decision Tree Algorithm

- K-Nearest Neighbours (KNN)

- Random Forest

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Technology Used:

The project leverages the following technologies:

Programming Language:

- Python

Libraries and Frameworks:

- Scikit-learn for implementing Naive Bayesian Method, Decision Tree Algorithm, Random forest, and K-Nearest Neighbours .

Working Methods:

- Training the prediction model: Describe how the system is trained on relevant datasets using each algorithm.

- User input processing: Explain how the system collects and processes symptoms for prediction.

- It will take 5 symptoms as user input and we can predict 4 disease based on these 5 symptoms.

- The predicted disease will store in the database with the patient name and symptoms name.

- It can generate a report where the name of the patient ,symptoms and disease will be shown.

Project Screen Shots:

Smart Disease Predictor System

By: Creative Techno College, Angul
Contributors: B.S. SAHOO (Asst. Professor)

Name of the Patient *	[ ]	Prediction 1
Symptom 1 *	Select Here	Prediction 2
Symptom 2 *	Select Here	Prediction 3
Symptom 3	Select Here	Prediction 4
Symptom 4	Select Here	Reset Inputs
Symptom 5	Select Here	Exit System
DecisionTree		
RandomForest		
NaiveBayes		
kNearestNeighbour		

Disease Prediction System

Data from Decision Tree

Name	Symptom 1	Symptom 2	Symptom 3	Symptom 4	Symptom 5	Disease	Action
Bhabani Sankar Sahoo	belly_pain	chest_pain	cramps	knee_pain	mild_fever	Osteoarthristis	Print
Adysha Sahoo	knee_pain	muscle_pain	chest_pain	back_pain	painful_walking	Dengue	Print
RAKESH	depression	chest_pain	back_pain	knee_pain	cramps	GERD	Print
Sourav	back_pain	chest_pain	cramps	fluid_overload	fast_heart_rate	Pneumonia	Print
Ashish	back_pain	belly_pain	chest_pain	dizziness	knee_pain	Typhoid	Print
ashish singh	chest_pain	coma	dizziness	bladder_discomfort	continuous_feel_of_urine	Hepatitis E	Print
Subodh	back_pain	chest_pain	continuous_feel_of_urine	dizziness	fast_heart_rate	Urinary tract infection	Print
VIvekananda	back_pain	belly_pain	neck_pain	Select Here	Select Here	Typhoid	Print
Anurag	bruising	abdominal_pain	excessive_hunger	irritability	knee_pain	Jaundice	Print
Anwesha Pradhan	blackheads	depression	excessive_hunger	knee_pain	lack_of_concentration	Hypertension	Print

Future Scope:

- Expansion to include additional symptoms and diseases

- Integration with emerging technologies

- Collaboration opportunities with healthcare professionals

<u>Conclusion</u>

Disease Prediction System stands at the forefront of proactive healthcare, offering a powerful tool for early disease detection. With robust algorithms, user-friendly design, and a commitment to data security, we envision a future where this system plays a pivotal role in enhancing healthcare outcomes.

<u>Bibliography</u>

- www.google.com

- www.youtube.com