TECHDIVAS PREDICT

TEAM MEMBERS

Sahana M -Front End Connectivity
Sindhu B - Model Crafting
Sinchana N S - Model Crafting
Keerthana P M - Model Testing
Nanditha A U - Model Capturing
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PROBLEM STATEMENT

The world is facing an unprecedented challenge in the form of diseases that spread rapidly and have the potential to cause widespread devastation. The current pandemic has highlighted just how unprepared we are to deal with such threats, and it has become clear that we need better tools to detect and respond to outbreaks before they become global crises.

Traditional methods of disease detection are slow, expensive, and often ineffective. They rely on manual testing and analysis of samples, which can take days or even weeks to produce results. This delay can be deadly in the case of fast-spreading diseases, as it allows the virus or bacteria to continue spreading unchecked. We need a more efficient and accurate way to detect diseases, one that can provide instant results and help us respond quickly to outbreaks.

REVOLUTIONIZING DISEASE PREDICTION IN MODERN TECHWORLD

In the modern tech-driven world, there is a critical need to develop an advanced multi-disease prediction system, TechDivas Predict, to tackle healthcare challenges. Traditional diagnostic methods suffer from limitations in accuracy, time, and cost. This system aims to leverage cutting-edge technologies, such as AI and machine learning, to predict multiple diseases simultaneously. By analyzing vast amounts of health-related data, including electronic health records and genetic information, TechMed Predict will identify patterns and risk factors associated with various diseases, enabling early detection and personalized management.
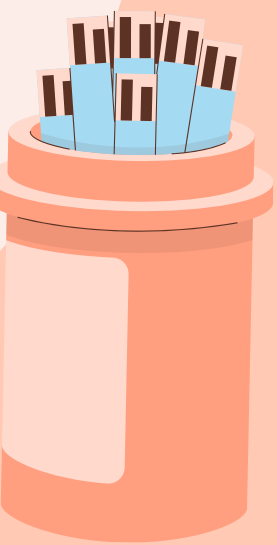
The benefits of TechDivas Predict are immense, as it empowers healthcare professionals to deliver timely and accurate diagnoses, leading to improved patient outcomes. The proactive approach to healthcare will shift the focus from reactive treatment to preventative measures, potentially reducing the burden on healthcare systems. However, challenges related to data privacy, interpretability, and system validation must be overcome through interdisciplinary collaboration between experts in healthcare, data science, and technology.

TechDivas Predict's mission is to revolutionize disease prediction, transforming healthcare into a proactive, data-driven system that prioritizes patient well-being.
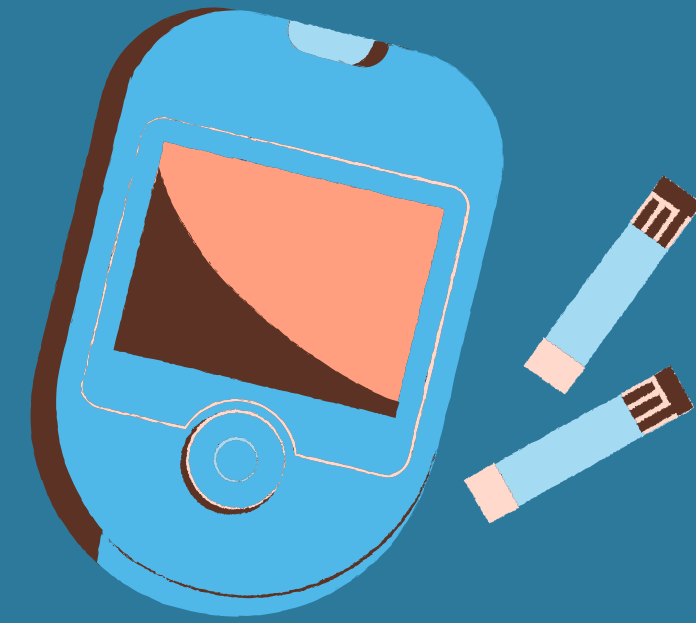
WOW FACTORS

- Our solution incorporates state-of-the-art machine learning algorithms that enable it to accurately detect diseases with unprecedented precision.
- Additionally, we have designed a user-friendly interface that makes our solution accessible to healthcare professionals and patients alike.
- This interface includes real-time analytics and visualizations that allow for quick and easy interpretation of results.
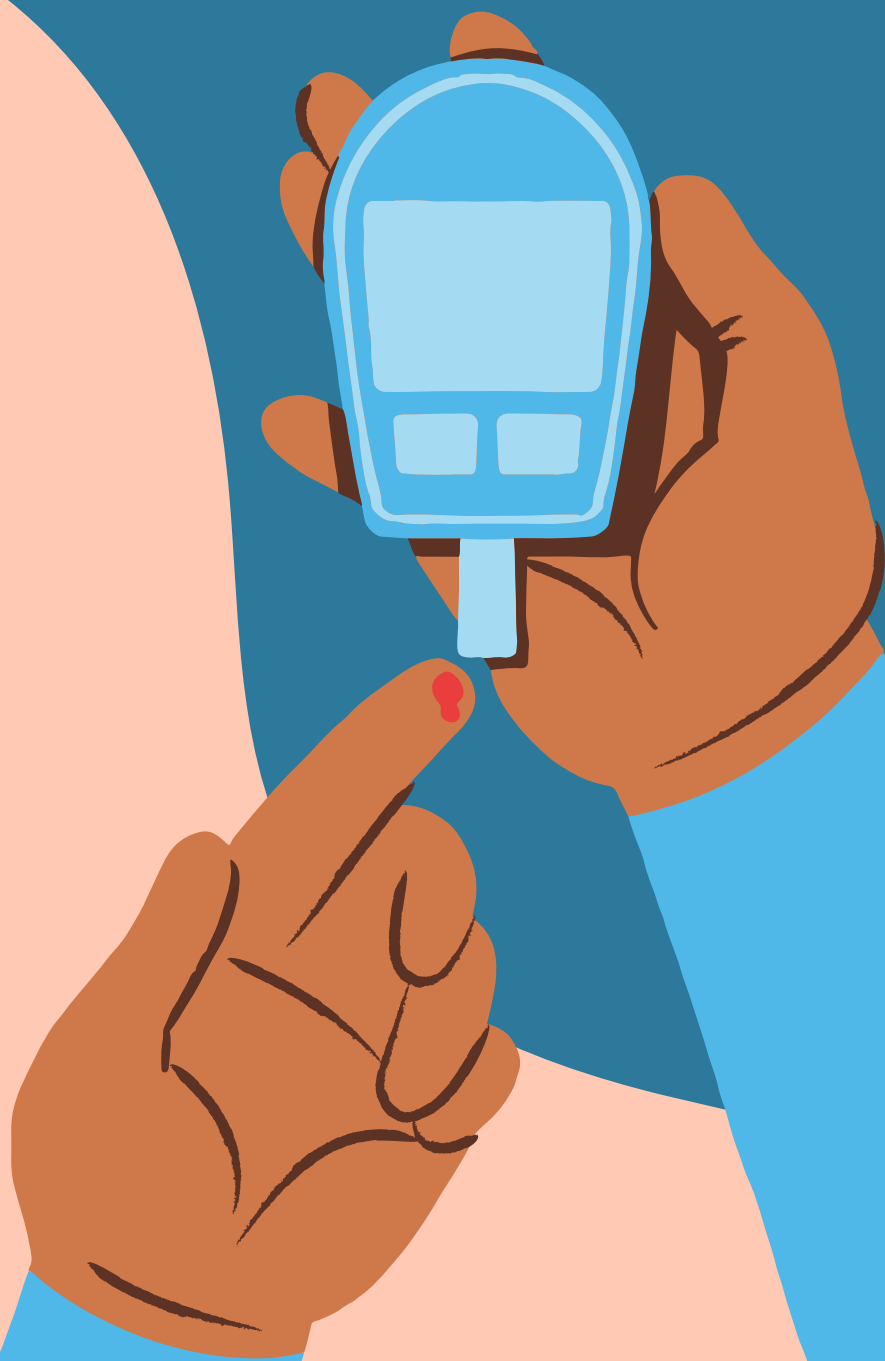
Here Is Solution!

- **Dataset Sourcing:** We accessed a Kaggle dataset, a treasure trove of diverse data, as the foundation of our project.

- **Model Crafting:** Leveraging Google Colab, we meticulously designed and trained predictive models, harnessing the dataset's potential.

- **Model Capturing:** Employing the efficiency of pickle, we saved our models, ensuring seamless retrieval and easy fusion across platforms.

- **Backend-Frontend Fusion:** Using Anaconda's Spyder, our project's backend integrated analytical prowess, harmonizing with frontend functionalities.

- **Interactive Display:** Streamlit, our frontend choice, brought the project to life. It facilitated user engagement, portraying results with intuitive ease.
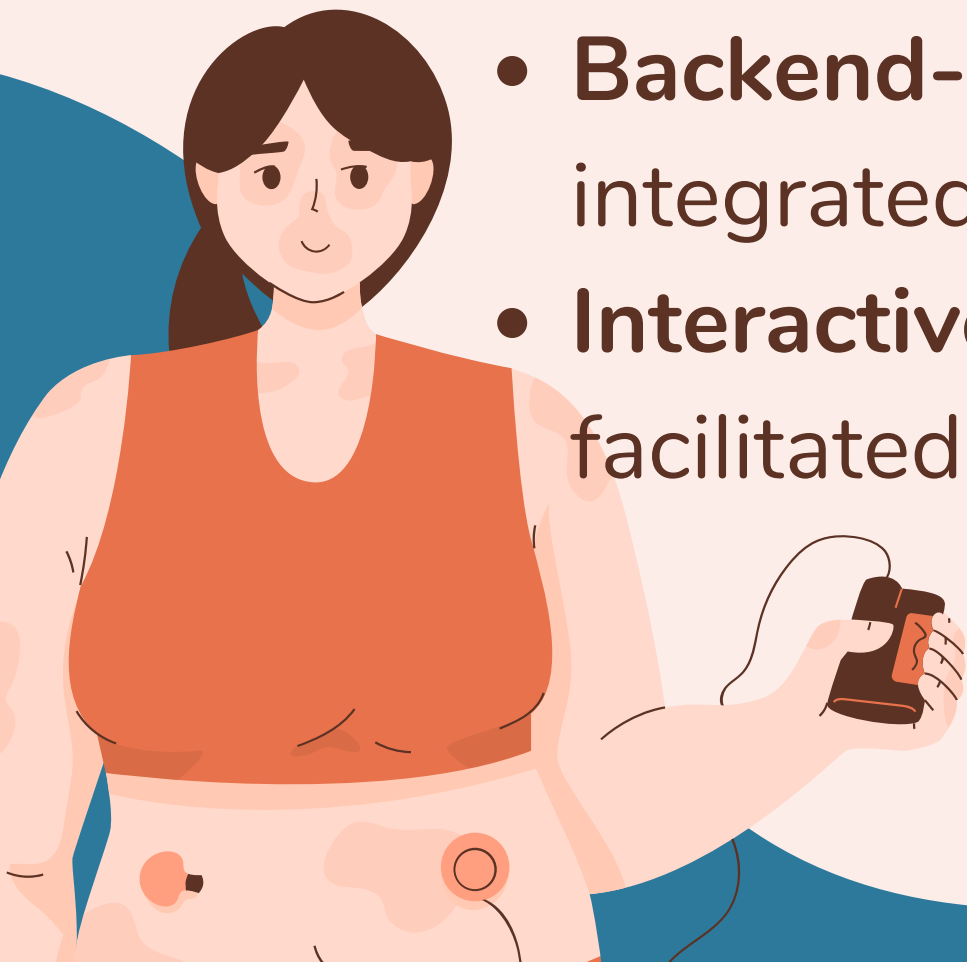
DIABETES PREDICTION
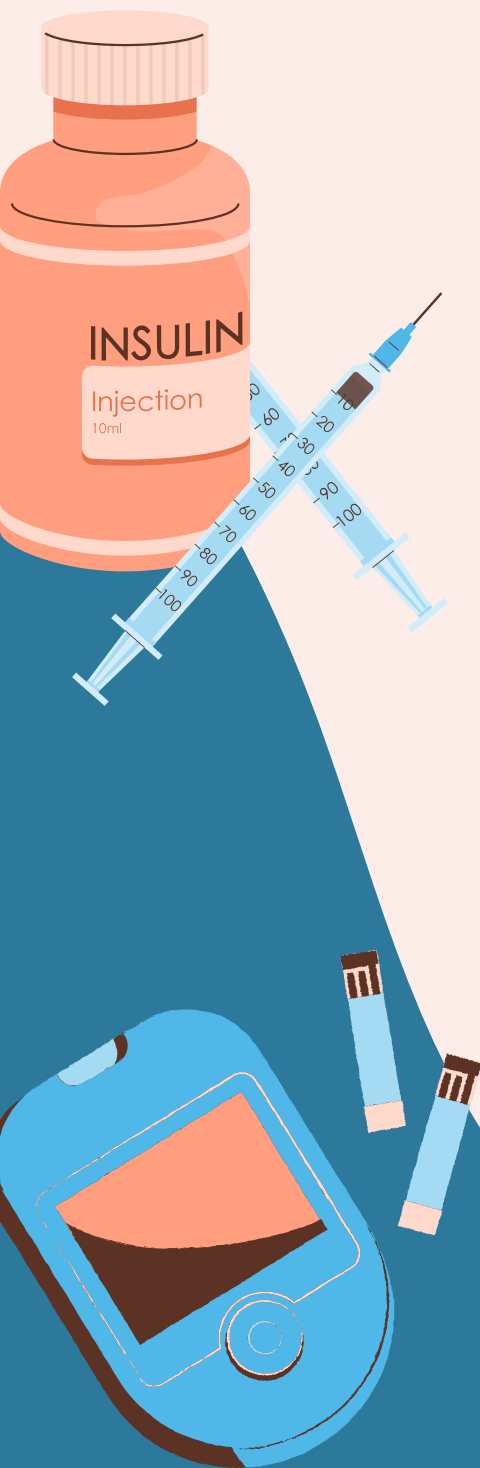
📄 MULTI-DISEASE PREDICTION FOR TOMMOROW'S WORLD

- 〰️ **Diabetes Prediction**
- 🫁 Lung cancer Prediction
- 👤 Parkinsons Prediction
- 👀 Chronic kidney disease
- 🤍 Heart attack prediction

Diabetes Prediction using ML

Number of Pregnancies	Glucose Level	Blood Pressure value
6	148	72

Skin Thickness value	Insulin Level	BMI value
35	0	33.6

Diabetes Pedigree Function value	Age of the Person
0.627	50

Diabetes Test Result

ohh nooo !The person is diabetic Manage your diabetes ABCs. Follow your diabetes meal plan Make physical activity part of your routine. Take your medicine. Check your blood glucose levels Monitor your blood sugar.

LUNG CANCER PREDICTION

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Lung Cancer Prediction using ML

Gender	Age of the Person	Smoking
0	59	1

Yellow Fingers	Anxiety	Peer Pressure
1	1	2

Chronic Disease	Fatigue	Allergy
1	2	1

Wheezing	Alchol	Coughing
2	1	2

Shortness_of_breath	Swallowing difficulty	Chest pain
2	1	1

Lung Cancer Test Result

The person does not have lung cancer

PARKINSON'S DISEASE PREDICTION

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Parkinson's Disease Prediction using ML

MDVP (Hz)	MDVP (Hz)	MDVP (Hz)	MDVP (%)	MDVP (Abs)
119.992	157.302	74.997	0.00784	0.00007

MDVP	MDVP	Jitter	MDVP	MDVP (dB)
0.0037	0.00554	0.01109	0.04374	0.426

Shimmer	Shimmer	MDVP	Shimmer	NHR
0.02182	0.0313	0.02971	0.06545	0.2211

HNR	RPDE	DFA	spread1	spread2
21.033	0.414783	0.815285	-4.81303	0.266482

D2	PPE
2.301442	0.284654

Parkinson's Test Result

The person has Parkinson's disease

CHRONIC KIDNEY DISEASE PREDICTION

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🤍 Heart attack prediction

Chronic kidney disease Prediction using ML

blood Pressuure	Sg	Al
80	1.02	1

Su	red blood cells	Bu
0	1	36

sc	Sod	Pot
1.2	137.53	4.63

Heamoglobin	Wbc	Rbcc
15.4	7800	5.2

htn
1

Chronic Kideny Test Result

The person has chances of chronic kidney disease

HEART ATTACK PREDICTION

MULTI-DISEASE PREDICTION FOR TOMMOROW'S WORLD

- Diabetes Prediction
- Lung cancer Prediction
- Parkinsons Prediction
- Chronic kidney disease
- ♡ **Heart attack prediction**

Heart attack Prediction using ML

age	sex	cp
63	1	3

trtbps	chol	fbs
145	233	1

ecg	thalachh	exng
0	150	0

oldpeak	slp	caa
2.3	0	0

thall
1

heart attack Test Result

ohoo! you are in trouble! the person has higher chances of getting heart attack

Yup! We Learned

Team work & collobration

Hackathon teamwork: Blend skills, communicate, respect ideas. Collaborate on tasks, innovate together. Success thrives when diverse strengths unite.

Presentation

Hackathon presentations: Be clear, concise. Structure content logically. Engage with enthusiasm. Showcase innovation, technical prowess. Address questions effectively, captivate audience.

Real world application

Hackathon's iterative development mirrors real-world adaptability. Refine prototypes based on feedback. Deliver effective, dynamic solutions for practical challenges.