Diabetes Risk Prediction System

- Presented By
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Introduction

- Diabetes is a most common disease in these world affecting major part of the population. Although it is a global concern but still most part of population are unaware to deal with it.
- Inability of pancreas to produce required insulin or inability to use it properly to convert glucose into energy is the cause of Diabetes
- Diabetes majorly of 3 types :
  - Diabetes Mellitus
  - Gestational Diabetes
  - Diabetes Insipidus

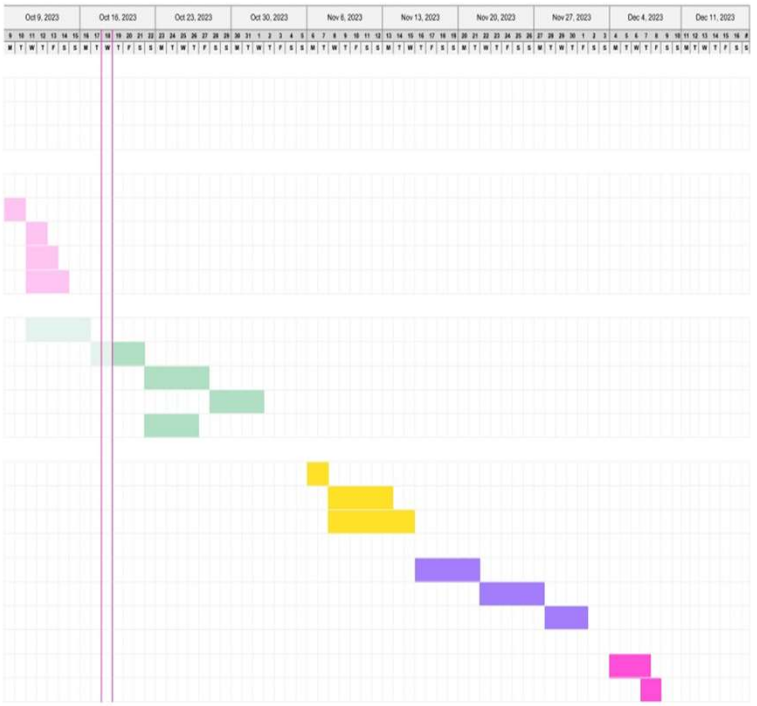
Gantt Chart

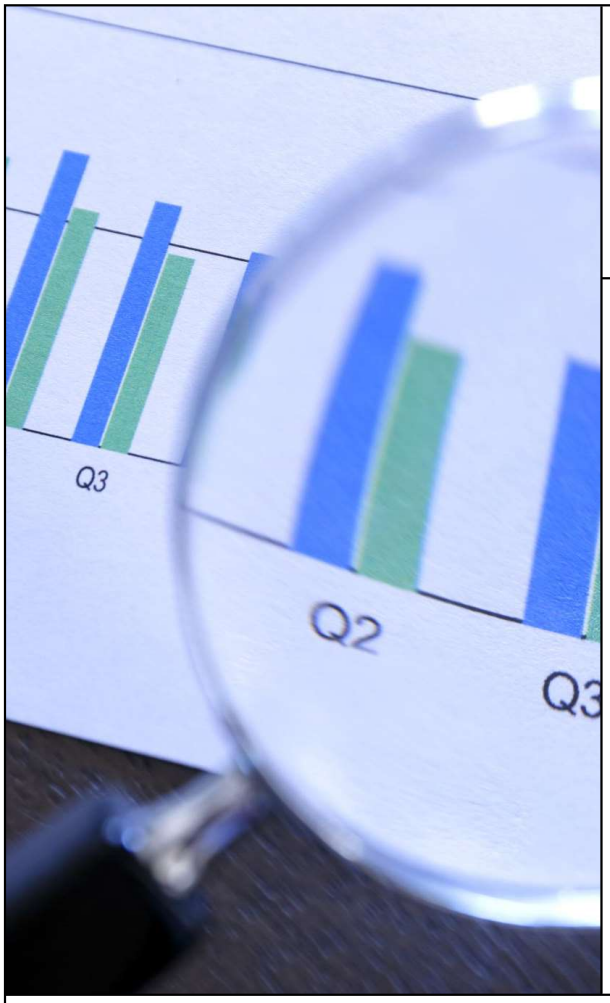
Diabetes Risk Prediction System

Project start: Tue, 9/26/2023

Display week: 3

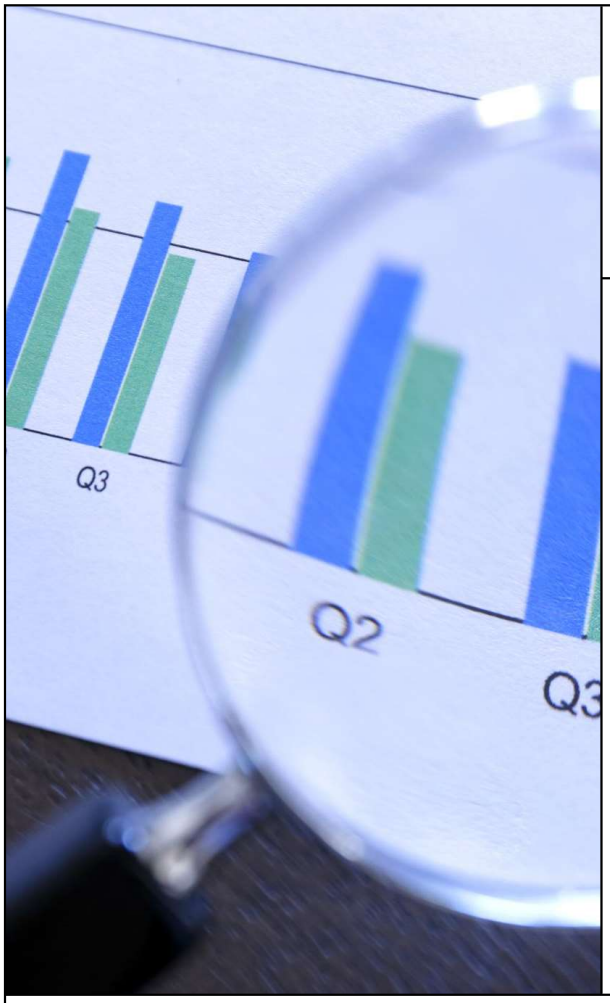
TASK	ASSIGNED TO	PROGRESS	START	END
Initiation				
Define data sources,	Chandana	100%	9/26/23	9/29/23
Gather accessible he	Harshitha, Geetha	100%	9/29/23	10/1/23
Acquire medical reco	Pavan	100%	10/1/23	10/5/23
Planning and design				
Load & inspect the da	Harshitha	100%	10/6/23	10/7/23
Examine the dataset	Geetha	100%	10/8/23	10/10/23
Check for missing va	Chandana	100%	10/11/23	10/12/23
Explore summary stat	Pavan	100%	10/11/23	10/13/23
Create a correlation r	Pavan, Geetha	100%	10/11/23	10/14/23
Model Selection				
Prepare & preprocess	chandana	100%	10/11/23	10/16/23
Splitting data	Harshitha	50%	10/17/23	10/21/23
Standardize the data	Geetha	0%	10/22/23	10/27/23
Implement KNN mod	Harshitha, geetha	0%	10/28/23	11/1/23
Implement SVC mod	Chandana, Pavan	0%	10/22/23	10/26/23
Reporting and Testing				
Generate project repo	Chandana, Geetha	0%	11/6/23	11/7/23
Testing models	Geetha	0%	11/8/23	11/13/23
Evaluate model accur	Harshitha	0%	11/8/23	11/15/23
Deployment				
Prepare the model	Pavan	0%	11/16/2023	11/21/2023
Deploy the model	All	0%	11/22/2023	11/27/2023
Acquire medical records	Pavan	0%	11/28/2023	12/1/2023
Conclusion				
Summarize the project findings	Harshitha	0%	12/4/2023	12/7/2023
Conclusion	Geetha	0%	12/7/2023	12/8/2023





Key Points

- Diabetes is a prevalent and widespread disease affecting a significant portion of the global population.
- The project aims to develop a Data Science solution to predict whether a given individual is diabetic or not based on relevant data.
- The model is built using various classification algorithms, with a focus on K-Nearest Neighbors (KNN) and Support Vector Machine (SVM).
- Creating a user-friendly interface for individuals to easily input their data and receive risk predictions.
- Discuss strategies for keeping the data up-to-date and maintaining the model's accuracy over time.



Implementation

- Collect a dataset containing relevant features such as age, weight, family history, diet, physical activity, and genetic factors. Ensure the dataset includes labels indicating whether individuals are diabetic or not.
- Split the dataset and testing subsets.
- Choose classification algorithms for the project, such as K-Nearest Neighbors (KNN) and Support Vector Machine (SVM).
- Compare the performance of different models and select the one that provides the highest accuracy in predicting diabetes risk.
- Ensure that your data is private.

Thank You