EXPOSYS DATA LABS

PROJECT PRESENTATION

DIABETES PREDICTION USING PYTHON

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1. DATA SCIENCE

Data science is a deep study of the massive amount of data, which involves extracting meaningful insights from raw, structured, and unstructured data that is processed using the scientific method, different technologies, and algorithms.

1.1 ANALOGY

Define Problem: Choosing the fastest route to work

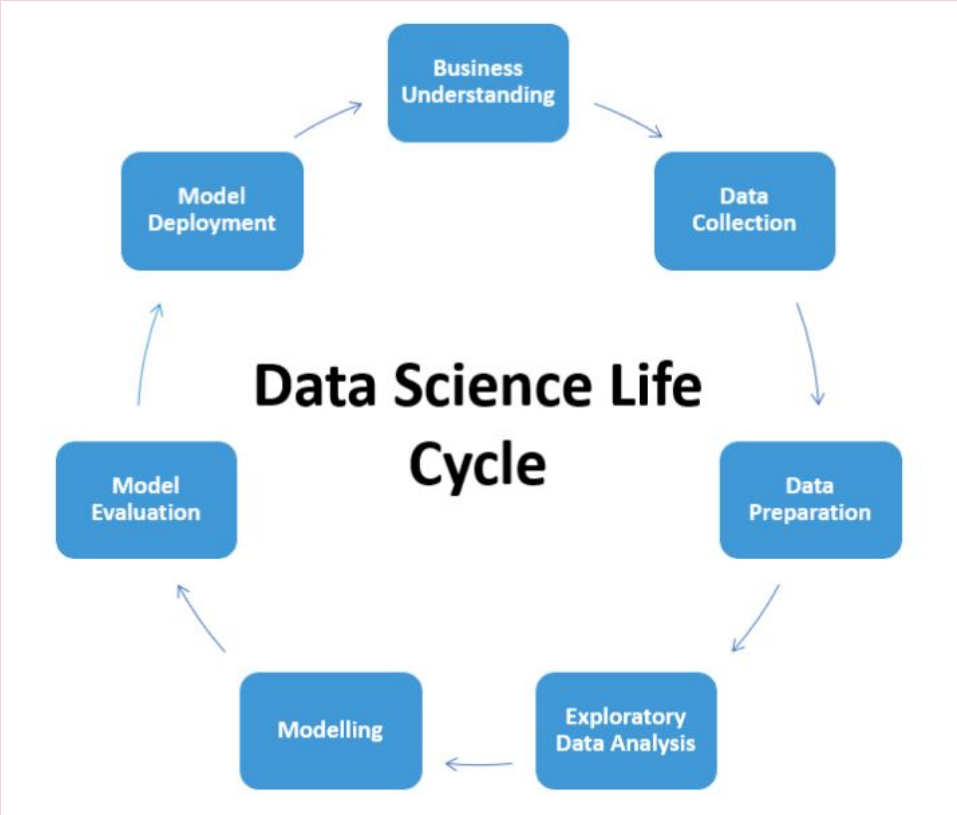
Data Collection: Observe the collected data and surroundings

Data Processing: Ignoring the unnecessary information

Exploring and Analysing: Selecting the decision & predicting values

Solution

2. DATA SCIENCE LIFE CYCLE



3. DIABETES PREDICTION

Diabetes is among critical diseases and lots of people are suffering from this disease.

Age, obesity, lack of exercise, hereditary diabetes, living style, bad diet, high blood pressure, etc. can cause Diabetes.

People having diabetes have high risk of diseases like heart disease, kidney disease, stroke, eye problem, nerve damage, etc.

Current practice in hospital is to collect required information for diabetes diagnosis through various tests and appropriate treatment is provided based on diagnosis.

Using data science, we can study huge datasets and find hidden information, hidden patterns to discover knowledge from the data and predict outcomes accordingly.

The model observes the relations between the functions and helps the user to identifies the diabetes of a person at a early age.

4. OBJECTIVE OF THE PROJECT

- To prepare the dataset using several methods to train the model
- Build a model which can give high accuracy of predicting the diseases.

5. LIBRARIES USED

This project has been developed in JUPYTER NOTEBOOK.

1. Numpy
2. Ipywidgets
3. Pandas
4. Sklearn
5. Seaborn

6. STEPS OF IMPLEMENTATION

PROJECT PLANNING

DATA COLLECTION

DATA CLEANING

EXPLORATORY DATA ANALYSIS

MODEL BUILDING

PRODUCTION

DOCUMENTATION

7. CONCLUSION

- In this project, we have train the model by the different collected datasets and has implement Diabetes Prediction using Machine Learning and Python in order to get the high accuracy by predicting the disease.

- The analysis results will help the user to make early decision to cure his/her diabetes at a very early age.

8. APPLICATIONS

Hospitals and Clinics

Home Usage

Industrial Purposes

Testing Purposes

THANK YOU