

Predictive Suite

Data Acquisition and Pre-processing

Exploratory Data Analysis

Model Building and Evaluation

Diabetes Prediction

Diabetes Prediction using KNN Classifier

Data Acquisition and Preprocessing

Upload CSV file

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Browse files

diabetes.csv

23.3KB

Dataset Preview:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
0	6	148	72	35	0	33.6	0.627	50	1
1	1	85	66	29	0	26.6	0.351	31	0
2	8	183	64	0	0	23.3	0.672	32	1
3	1	89	66	23	94	28.1	0.167	21	0
4	0	137	40	35	168	43.1	2.288	33	1

Data after Pre-processing:

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI	DiabetesPedigreeFunction	Age	Outcome
0	6	148	72	35	0	33.6	0.627	50	1
1	1	85	66	29	0	26.6	0.351	31	0
2	8	183	64	0	0	23.3	0.672	32	1
3	1	89	66	23	94	28.1	0.167	21	0
4	0	137	40	35	168	43.1	2.288	33	1

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CIA 3 – Modular Coding

Predicting Diabetes Risk with k-Nearest Neighbors (k-NN)

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Best KNN Model Accuracy after Hyperparameter Tuning:

74.68%

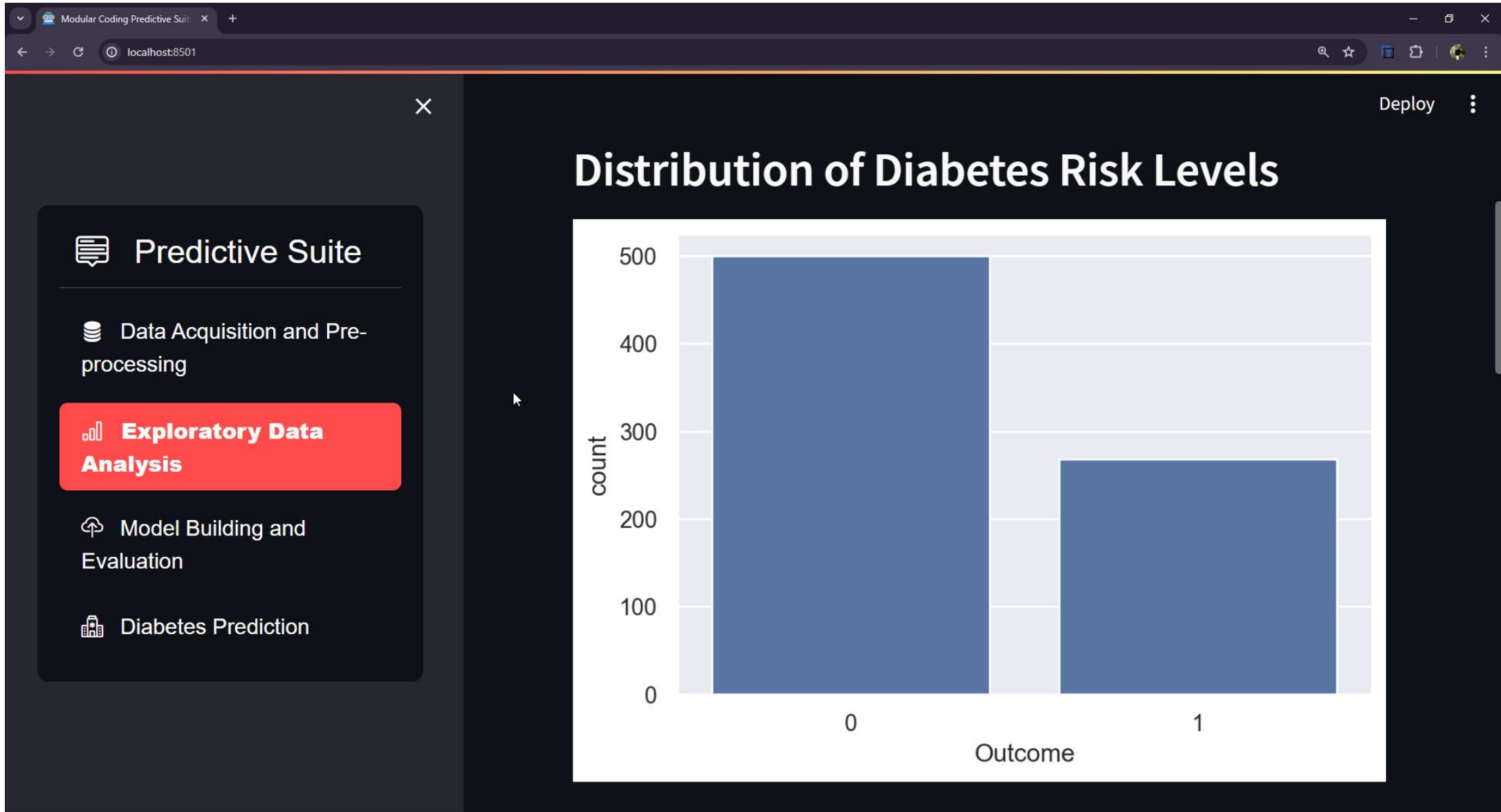
Best Parameters:

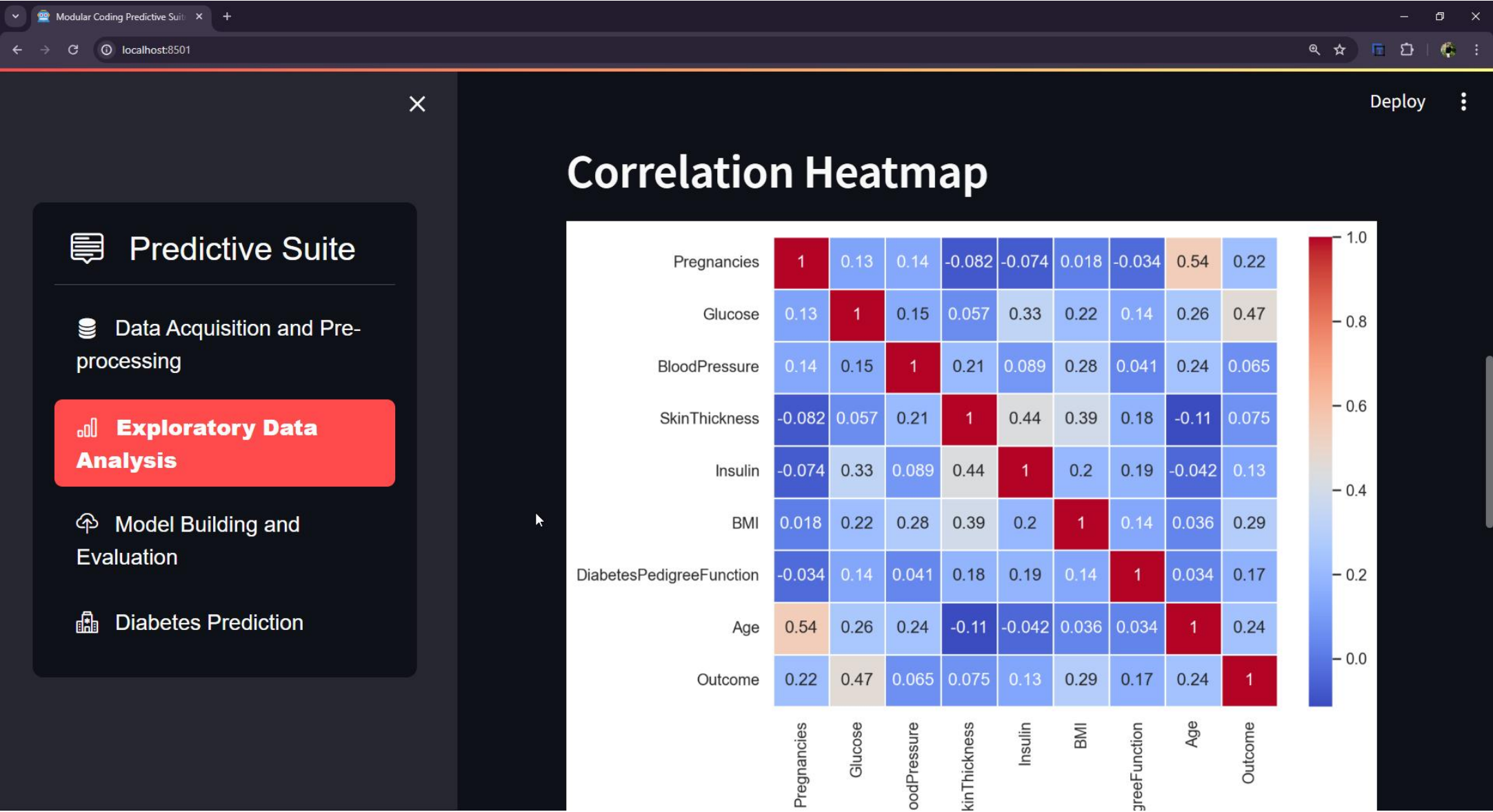
```
{  
  "algorithm": "auto"  
  "leaf_size": 30  
  "metric": "minkowski"  
  "metric_params": NULL  
  "n_jobs": NULL  
  "n_neighbors": 8  
  "p": 2  
  "weights": "uniform"  
}
```

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CIA 3 – Modular Coding

Predicting Diabetes Risk with k-Nearest Neighbors (k-NN)

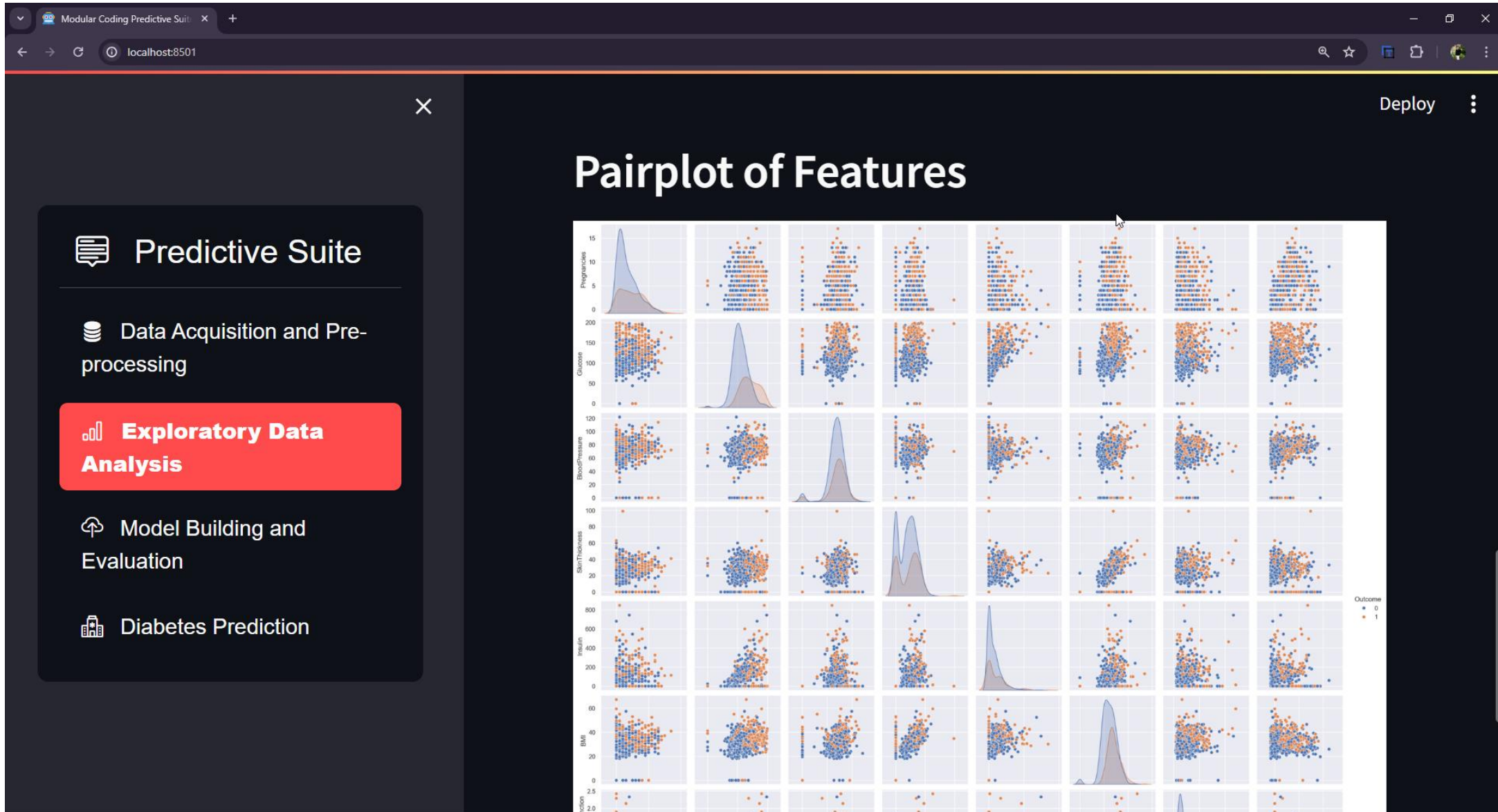




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CIA 3 – Modular Coding

Predicting Diabetes Risk with k-Nearest Neighbors (k-NN)



Modular Coding Predictive Suite

localhost:8501

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Model Evaluation Metrics

Accuracy: 0.66

Precision: 0.52

Recall: 0.58

F1-score: 0.55

Best Hyperparameters

```
{
  "n_neighbors" : 9
}
```

CIA 3 – Modular Coding

Predicting Diabetes Risk with k-Nearest Neighbors (k-NN)

Modular Coding Predictive Suite

localhost:8501

Deploy

Predictive Suite

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Diabetes Prediction

Diabetes Prediction using ML

Number of Pregnancies

6

Glucose Level(80-200mg/dL)

148

Blood Pressure value()

72

Skin Thickness value

35

Insulin Level

0

BMI value

33.6

Diabetes Pedigree Function value

0.627

Age of the Person

50

Diabetes Test Result

The person is diabetic

CIA 3 – Modular Coding

Predicting Diabetes Risk with k-Nearest Neighbors (k-NN)

Project Overview

Project shortcuts

Firestore Database

Realtime Database

Authentication

Remote Config

Analytics Dashboard

Product categories

Build

Release & Monitor

Analytics

Engage

All products

Spark

No-cost \$0/month

Upgrade

AI fusion framework

Cloud Firestore

Add database

DataRulesIndexesUsageExtensions

Protect your Cloud Firestore resources from abuse, such as billing fraud or phishing

Configure App Check

Panel viewQuery builder

diabetes_inputs


v3nGvIMCGmc0.

More in Google Cloud

(default)	diabetes_inputs	v3nGvIMCGmc0bJB6TXW0
+ Start collection	+ Add document	+ Start collection
diabetes_inputs	<div>m1qmu9MaBQrEvENsRfsc</div> <div>pEvKyr9dAQviKcAqHAhp</div> <div>v3nGvIMCGmc0bJB6TXW0</div> <div>vrXabCf5Ui8FZW35PP20</div>	<div>+ Add field</div> <div>age: "6"</div> <div>blood_pressure: "7"</div> <div>bmi: "8"</div> <div>diagnosis: 0</div> <div>dpf: "3"</div> <div>glucose: "4"</div> <div>insulin: "5"</div> <div>pregnancies: "1"</div> <div>skin_thickness: "2"</div>

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 **Firebase**

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Authentication

Users | Sign-in method | Templates | Usage | Settings | Extensions

Search by email address, phone number, or user UID

Add user

Identifier	Providers	Created	Signed In	User UID
qwerty@asdf.com		Apr 21, 2024		mLrtHjpVXZMdBBvNwlsW8sw...
asd@as.co		Apr 21, 2024		65TFWrJvqBPAK54BlGSZFAY...

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