Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID06357
Project Name	Project – Detecting of Parkinson's disease using Machine Learning
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

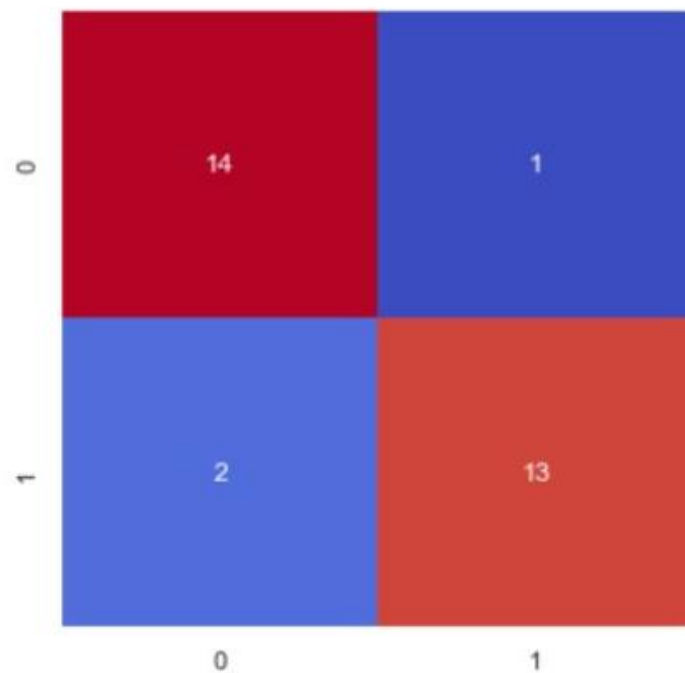| S. .No	Parameter	Values
1.	Metrics	Classification Model: Confusion Matrix and Accuracy Score
2.	Testing	Testing model: Total Requests per second, Response Times, No. of users
3.	Locus Testing Report	**Testing Report:** **Request Statistics, Response Time Statistics, Final Ratio**

1)Metric

Model Evaluation

```
In [36]: cnf = confusion_matrix(testY,preds)
         cnf

Out[36]: array([[14,  1],
                [ 2, 13]], dtype=int64)

In [37]: plt.figure(figsize=(5,5))
         sns.heatmap(cnf , annot=True , cmap="coolwarm" , cbar=False)
         plt.show()
```

Accuracy:

Model accuracy and Prediction ¶
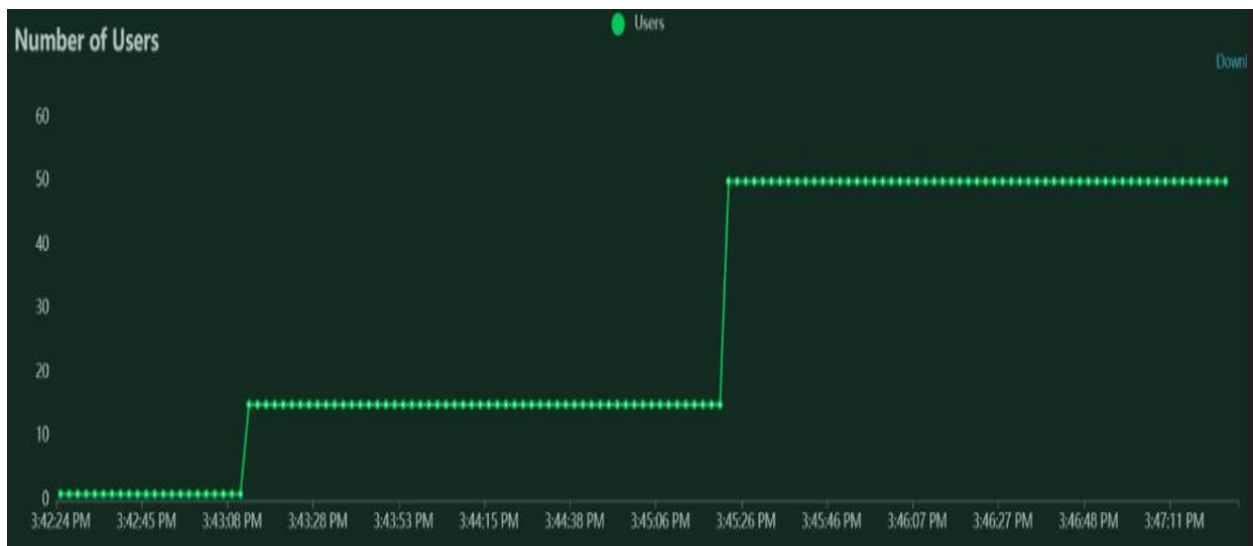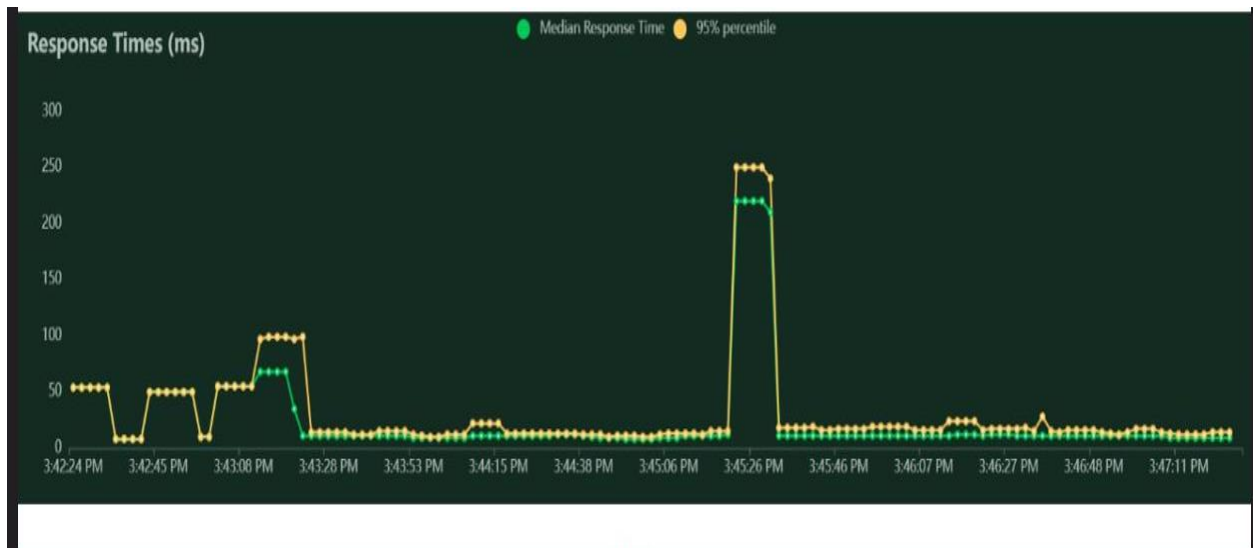
```
In [45]: predictions = model.predict(testX)

         cm = confusion_matrix(testY, predictions).flatten()
         print(cm)
         (tn, fp, fn, tp) = cm
         accuracy = (tp + tn) / float(cm.sum())
         print(accuracy)

         [14  1  2 13]
         0.9
```

2) Testing

Response Times (ms)

Legend: ● Median Response Time ● 95% percentile

Y-axis: 300, 250, 200, 150, 100, 50, 0

X-axis: 3:42:24 PM, 3:42:45 PM, 3:43:08 PM, 3:43:28 PM, 3:43:53 PM, 3:44:15 PM, 3:44:38 PM, 3:45:06 PM, 3:45:26 PM, 3:45:46 PM, 3:46:07 PM, 3:46:27 PM, 3:46:48 PM, 3:47:11 PM

Number of Users

Legend: ● Users

Downl

Y-axis: 60, 50, 40, 30, 20, 10, 0

X-axis: 3:42:24 PM, 3:42:45 PM, 3:43:08 PM, 3:43:28 PM, 3:43:53 PM, 3:44:15 PM, 3:44:38 PM, 3:45:06 PM, 3:45:26 PM, 3:45:46 PM, 3:46:07 PM, 3:46:27 PM, 3:46:48 PM, 3:47:11 PM

3) Locus Testing Report:

Request Statistics

Method	Name	# Requests	# Fails	Average (ms)	Min (ms)	Max (ms)	Average size (bytes)	RPS	Failures/s
GET	/	131	0	16	5	221	1632	0.4	0.0
GET	/contact	127	0	30	5	241	4007	0.4	0.0
GET	/explore	115	0	18	4	260	2233	0.4	0.0
GET	/home	104	0	26	5	252	1182	0.3	0.0
GET	/images	127	0	18	5	240	1207	0.4	0.0
GET	/prediction	134	0	20	5	229	380	0.4	0.0
GET	/signup	80	0	19	5	237	2021	0.3	0.0
	Aggregated	818	0	21	4	260	1794	2.6	0.0

Response Time Statistics

Method	Name	50%ile (ms)	60%ile (ms)	70%ile (ms)	80%ile (ms)	90%ile (ms)	95%ile (ms)	99%ile (ms)	100%ile (ms)
GET	/	11	11	11	12	14	17	220	220
GET	/contact	11	11	12	13	88	220	230	240
GET	/explore	11	11	12	13	16	22	240	260
GET	/home	11	11	12	14	20	220	250	250
GET	/images	11	11	12	13	17	32	220	240
GET	/prediction	11	11	11	13	15	65	230	230
GET	/signup	11	11	12	13	15	50	240	240
	Aggregated	11	11	12	13	17	75	230	260

Final ratio

Ratio per User class

- 100.0% WebsiteUser
    - 14.3% index
    - 14.3% home
    - 14.3% home1
    - 14.3% contact
    - 14.3% prediction
    - 14.3% images
    - 14.3% explore

Total ratio

- 100.0% WebsiteUser
    - 14.3% index
    - 14.3% home
    - 14.3% home1
    - 14.3% contact
    - 14.3% prediction
    - 14.3% images
    - 14.3% explore