SVKM's NMIMS
Mukesh Patel School of Technology Management & Engineering
Computer Engineering Department
Program: B. Tech/MBA Tech EXTC

Course: B. Tech/MBA. Tech (EXTC)
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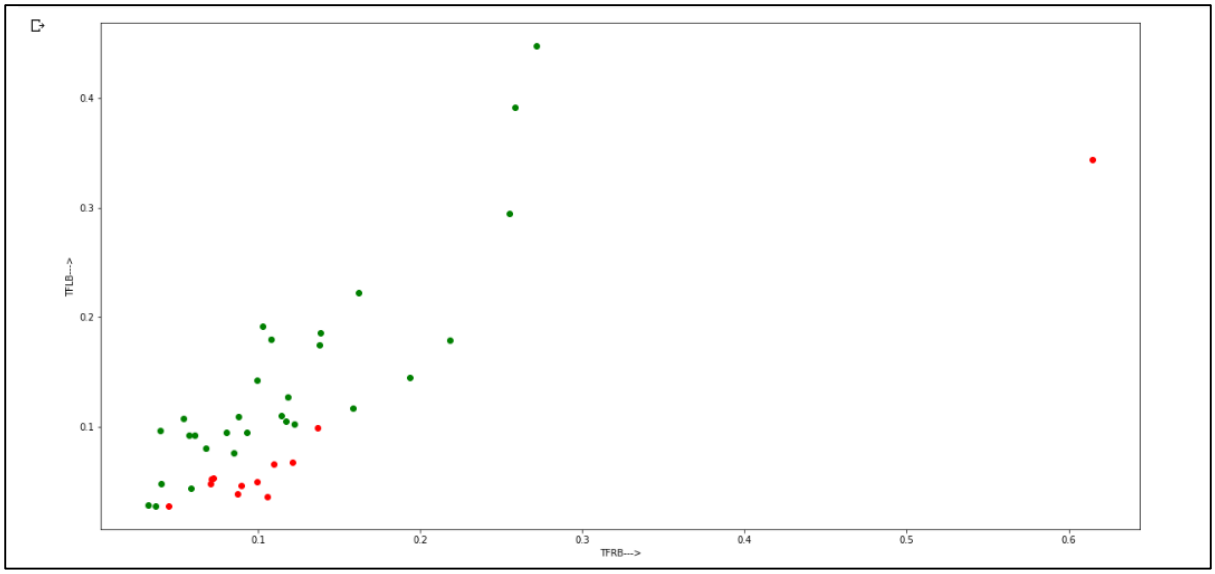
Batch:	*Date of Experiment:* 17-02-2022
Date of Submission: 17-02-2022	*Grade:*

AIM: -To implement descriptive models of stimulus cognition using supervised knn algorithm

Instructions and Objective:

1. Download FTheta and OTheta from file section team
2. Curate the data if required
3. Draw the scatter (x axis right brain and y axis left brain only for the during stimulus features) plot using different colours for labels showing asymmetry pattern
4. Apply Knn classifier algorithm (80% training and 20% testing)
5. Use evaluation attributes precision recall f1-score

Output:



Printing out the accuracy for different weights and algorithm in the form of an array

Weights- Uniform

Algorithm-Auto

```
[0.84, 0.88, 0.8, 0.8, 0.76, 0.8, 0.72, 0.72, 0.72, 0.76]
```

Weights- Distance

Algorithm-Auto

```
[0.84, 0.84, 0.84, 0.84, 0.8, 0.84, 0.8, 0.8, 0.8, 0.84]
```

Weights- Uniform

Algorithm-Ball tree

```
[0.84, 0.88, 0.8, 0.8, 0.76, 0.8, 0.72, 0.72, 0.72, 0.76]
```

Weights- Uniform

Algorithm-Kd tree

```
[0.84, 0.88, 0.8, 0.8, 0.76, 0.8, 0.72, 0.72, 0.72, 0.76]
```

Classification Report

	precision	recall	f1-score	support
A	0.90	0.95	0.92	19
N	0.80	0.67	0.73	6
accuracy			0.88	25
macro avg	0.85	0.81	0.83	25
weighted avg	0.88	0.88	0.88	25

0.88

Accuracy- 88%

Confusion Matrix

```
[[18  1]
 [ 2  4]]
```

Conclusion:

Thus using the KNN machine learning algorithm we depicted the TFRB and TFLB. Using different weights and algorithms for different neighbours we found the accuracy of 88%.