

Smart Futuristic Learning Platform

moving towards a
bright future



Our Team

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Overview of Dataset

- Used the dataset from PsychoBank on Seizures.
- The dataset contains EEG readings for 1 minutes and has around 120,000 tuples.

SnapShot of DataSet

	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
1	'Time and date'	'EEG P08'	'EEG P07'	'EEG P8'	'EEG P7'	'EEG 01'	'EEG 02'	'EEG P03'	'EEG P04'	'Status Channel'	'EDF Annotations'
2	'hh:mm:ss.mmm dd/mm/yyyy'	'uV'	'uV'	'uV'	'uV'	'uV'	'uV'	'uV'	'uV'	'uV'	'
3	'[23:27:16.000 06/02/2013]'	16.281	-0.375	-4.344	-2.688	-2.750	-6.063	-15.781	-0.719	-	0.376
4	'[23:27:16.000 06/02/2013]'	15.781	-0.344	-4.813	-3.125	-3.656	-6.594	-18.969	-1.375	-	0.376
5	'[23:27:16.001 06/02/2013]'	15.281	-0.313	-5.313	-3.563	-4.531	-7.125	-22.063	-2.031	-	0.376
6	'[23:27:16.001 06/02/2013]'	14.750	-0.281	-5.781	-4.000	-5.406	-7.625	-25.125	-2.688	-	0.376
7	'[23:27:16.002 06/02/2013]'	14.156	-0.250	-6.219	-4.438	-6.250	-8.094	-28.094	-3.344	-	0.376
8	'[23:27:16.002 06/02/2013]'	13.563	-0.250	-6.688	-4.875	-7.063	-8.594	-30.969	-3.969	-	0.376
9	'[23:27:16.003 06/02/2013]'	12.969	-0.219	-7.125	-5.313	-7.844	-9.031	-33.750	-4.563	-	0.376
10	'[23:27:16.003 06/02/2013]'	12.313	-0.219	-7.531	-5.719	-8.594	-9.469	-36.407	-5.156	-	0.376
11	'[23:27:16.004 06/02/2013]'	11.656	-0.219	-7.969	-6.156	-9.313	-9.906	-38.969	-5.719	-	0.376
12	'[23:27:16.004 06/02/2013]'	11.000	-0.250	-8.375	-6.594	-10.000	-10.313	-41.376	-6.250	-	0.376

Analysis

- Ran the dataset on various clustering models on Weka.
- Optimally obtained 2 clusters.
- The split was 99% to 1%.

Cluster Centroids

Cluster centroids:

Attribute	Full Data (49152)	Cluster#	
		0 (48838)	1 (314)
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EEG P08	0.0	0.0	5.063
EEG P07	0.0	0.0	-5.188
EEG P8	0.0	0.0	-4.5
EEG P7	0.0	0.0	-7.438
EEG 01	0.0	0.0	-14.0
EEG 02	0.0	0.0	-8.844
EEG P03	0.0	0.0	-29.594
EEG P04	0.0	0.0	-7.938

Training the data

- The dataset was trained on Support Vector Machine.
- L2 regularization was used to reduce the overfitting of the data.
- Skewness was reduced by training the data in batches.

Recommender System

- ML-100k data is used to run the recommender system.
- Collaborative filtering is used in providing the recommendations.
- Same approach will be used in recommending courses.

THANK YOU