Machine Learning Algorithms for Epileptic Seizure

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Περιεχομενα Παρουσιασης

- Εισαγωγη
- Περιγραφη του προβληματος και περιγραφη του αλγοριθμου και των δεδομενων εφαρμογης του
- Πειραματικο Σεναριο
- Συμπερασματα

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- One of 10 people will have at least one epileptic seizure during a normal lifespan and a third of them will develop epilepsy.
- Epilepsy accounts for 1% of the global burden of disease

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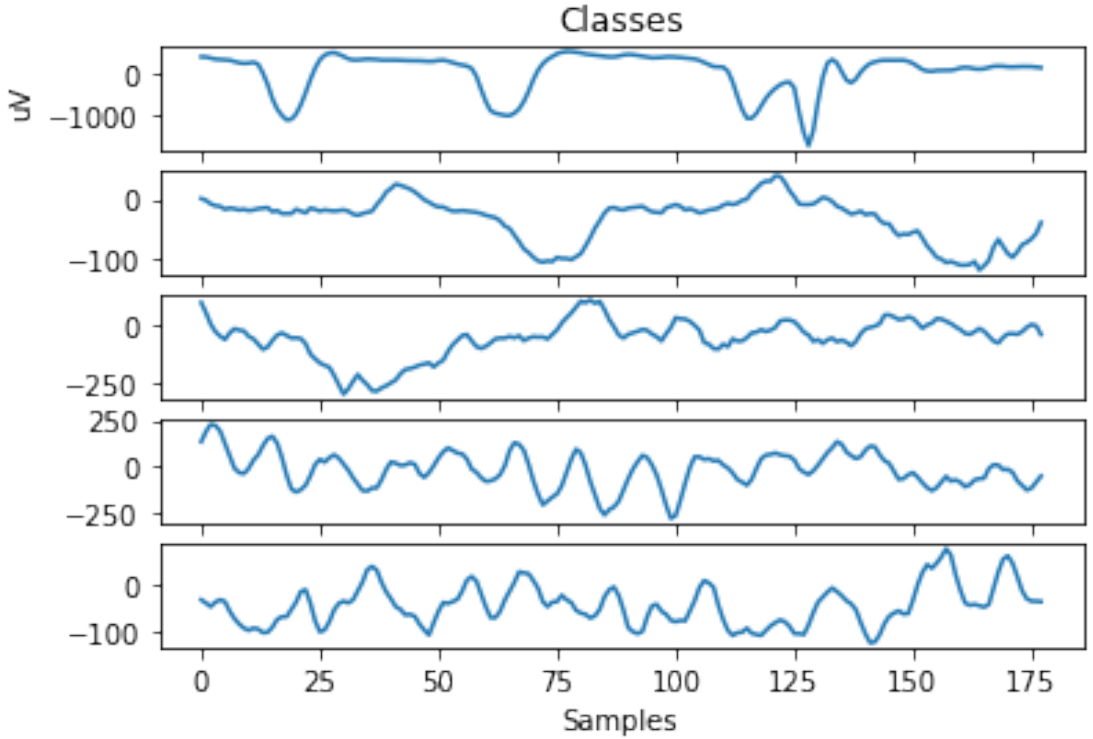
- The frequency makes EEG curves that show the brain activity with the time parameter.

Περιγραφη των δεδομενων

- The dataset consists of 11500 samples(pieces of information), each with 178 features and the samples are normally distributed and are categorized into five different classes.


Classes
uV
0
−1000
0
−100
0
−250
250
0
−250
0
−100
0
25
50
75
100
125
150
175
Samples

Περιγραφη του αλγοριθμου

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- K- Nearest Neighbor is a non parametric classification method

Εφαρμογη των δεδομενων

- Χρησιμοποιωντας τα παραπανω δεδομενα, δημιουργουμε εναν αλγοριθμο σε python , ο οποιος θα δινει απαντηση για το αν ενας ασθενης εχει ’η θα εμφανισει επιληπτικη κριση

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- According to ANN, SVM, K-NN algorithms we have the results:

Πειραματικο σεναριο: Αποτελεσματα

True Epilepsy	True Normal
200	1
0	199

True Epilepsy	True Normal
200	2
0	198

True Epilepsy	True Normal
200	0
0	200

Συμπερασματα

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- The epileptic seizure data set was classified using different classification.
- Epileptic seizure is a serious disorder of the brain , which must be prevented in time