# ABSTRACT

Focal Non-Specific Seizure Signals are a group of epileptic seizures that occur because abnormal signals only occur in certain parts of the brain. Judging from EEG waves, Focal Non-Specific Seizure signals have different characteristics and therefore this signal can be identified. Fast activity that is thoroughly high voltage on EEG signals will be able to show the presence of Focal Non-Specific Seizure signals. On the other hand there has been a lot of research conducted to examine the signal seizures found in EEG signals of epilepsy.

In this final assignment, the detection of a Focal Non Specific Seizure signal in brain activity using EEG was detected to epilepsy data which would be compared with training data for normal people. The processed signal is a signal that has gone through several processes, namely preprocessing, feature extraction using Independent Component Analysis (ICA) and classification with Artificial Neural Networks (ANN).

The test results showed that the combination of all parameters with the corresponding ANN weight produced the highest accuracy up to 98.46%. This shows that ICA feature extraction and ANN classification are able to recognize Focal Non Specific Seizure signals that are in the input EEG signal.

Keywords : Electroencephalography, Independent Component Analysis, Focal Non Specific Seizure.