PROJECT REPORT

COMPARATIVE ANALYSIS OF SUPPORT VECTOR MACHINE (SVM) AND K-NEAREST NEIGHBOR (KNN) FOR TRAUMATIC BRAIN INJURY (TBI) CLASSIFICATION BASED-ON ELECTROENCEPHALOGRAM (EEG)

EMY DAMAYANTI
19.K1.0050

Faculty of Computer Science
Soegijapranata Catholic University
2024

ABSTRACT

Traumatic brain injury (TBI) is the leading cause of death in the United States. Traumatic brain injury is indicated by the presence of various comorbidities, including neurological deficits, neuropsychiatric abnormalities, and cognitive impairment. Traumatic Brain Injury or TBI is defined as a functional impairment of the brain caused by an impact that leads to decreased consciousness, and brain impairment in the sufferer. This research can solve the problem by creating a prediction system for Electroencephalogram (EEG) results using Machine Learning. In this research, researchers will focus on analyzing the Support Vector Machine (SVM) and K-Nearest Neighbor (KNN) algorithms with EEG as a dataset for TBI.

Keyword: Traumatic Brain Injury, Electroencephalogram, Independent Component Analysis, Support Vector Machine, K-Nearest Neighbor