

ABSTRACT

Company PT. Artificial Intelligence Indonesia (AII) is an institution established in collaboration with FMIPA University of Indonesia with UMG Idea Lab Indonesia, which aims to develop human resources in the field of AI to build the nation's capability to welcome the industrial revolution 4.0. Independent Study is one of the activities to achieve this goal, which targets participants from the Higher Education level. These activities include learning activities, training, independent assignments, and teaching practices. Learning and training activities will be conducted online using the 5E model (Engage, Explore, Explain, Evaluate, Extend). After the learning and training are completed, participants will be given project-based assignments tailored to each participant's interests. In this report, the proposed project is entitled Application of Machine Learning Classification Algorithm in Film Review Sentiment Analysis. This project applies Natural Language Processing using a machine learning classification model trained on 25000 datasets from the IMDB film review website to analyze the review's sentiment. As a result, the algorithm used as the application model is SGDClassifier with a prediction accuracy of 89%, which is implemented on the web using the flask framework.

Keywords : *PT. Artificial Intelligence Indonesia, Independent Study, Machine Learning, Sentiment Analysis, IMDB.*