1. INTRODUCTION

The Internet's global accessibility has fundamentally altered our thoughts about the realm. Media Social in various forms,like Social Media, News, Forum, Dating, Online Game, Example of Social Media with different purpose are Youtube forstreaming video, Instagram for sharing photos, Linkedin for business,Facebook and Twitter for sharing opinions [1]. Twitter has about 3.7 million users with over 10 million tweets in a day, And Twitter is the 2nd popular social media [2].Twitter is the best media and a place for researchers because it is the most important data sources[3]. Twitter has also evolved into a valuable place for analysis to predict crime, and track terrorists, and to detect and predict hate speech. Because of Twitter with its popularity and the amount of data that is tweeted on user-generated twitter, the number of hate speeches continues to rise. Dynamic research continues to focus on the classification of hate speech using social media data [1]. The classification of hate speech using the Naive Bayes method gets unsatisfactory results with low accuracy compared to other methods. Naive Bayes method slightly outperforms other methods with an accuracy of 60%[4].

In Indonesia, researchers conducted research on the classification of hate speech [5][6][7][8] on Twitter and Instagram platforms. Classification of English hate speech has been done previously[9][10][11][12]. In the study[13] auto-detected online cyber hate with a special hashtag for women's clothing on a twitter platform in Turkey. The study collected data using a hashtag filter. Then, for the classification stage, feature extraction is performed using many classifier such as Decision Tree, Naïve Bayes,SVM or Support Vector Machine and J48. The last stage is done by validating the model with 4-fold cross validation. Preliminary results show that hateful content can be detected with a high precision value (97%) but a more sophisticated approach is needed to increase recall scores. From the results of theexperiments carried out, the Naïve Bayes algorithm and Linear SVM have good results compared to other methods but have a small recall value.

Pereira-Kohatsu et al. created HaterNet, HaterNet is currently used by the Spanish National Office to identify hatespeech on Twitter and HaterNet as a smart system. This study used 2 million tweets for data, and feature extraction was done using word2vec. The LASSO model is then used to select features for the classification stage, which includes Logistic Regression (LR), Random Forest (RF), SVM, Neural Networks and QDA or Quadratic Discriminant Analysis, and LDA or Linear Discriminant Analysis and confusion matrix evaluation. From the experiments that have been carriedout, the AUC value of 0.828 was obtained using words embedding, emoji, and token expressions [1].

The research used the Deep Learning Method so that the required dataset is quite large and the processing takes along time. Following research by Al-Hassan, A. et al. for identify and categorize Language Arabic tweets into five categories: General Hatred, None, Sexism and Racism also religious. This study used data from 11 thousand Arabic- language tweets. Deep Learning and SVM methods are used for classification. For evaluate classification using confusionmatrix. In terms of detecting hateful tweets, the four model deep learning outperformed the SVM model. Although SVMachieves a recall of 74%, the deep learning model achieves an average recall of 75%. Adding a CNN layer to LTSM, onthe other hand, improves overall detection performance by 72% in terms of precision, 75% in terms of recall, and 73% interms of F1-score [5]. In terms of research, Pratama, B. Y., and colleagues are conducting research to improve the accuracy of previous research. The study also discusses how to create a system to predict personality from texts written by Twitter users. The dataset is derived from the user's username and English tweet [14]. Nave Bayes, K-Nearest Neighbor (KNN), and SVM are used for classification. The classification results are validated using 10-fold cross validation. Basedon the text of the tweet, the personality of Twitter users was successfully predicted. With an average accuracy of 60 percent, Nave Bayes slightly outperforms the other methods among the three used. Research on classification problems has also been carried out by Kaur & Karla using the Hybrid ANN method. The combination of swarm intelligence (SI) optimization and ANN is extremely beneficial in accelerating the convergence of Hybrid ANN in classification to variousbenchmark problems. The results demonstrated that Hybrid ANN reduced misclassification [15].

Previous research by Hassan and Dossari explain that on hate speech classification revealed that the four deep learning models outperformed SVM, despite SVM achieving 74 percent recall and deep learning achieving an average of75 percent [5]. However, because deep learning requires a very large dataset, it takes a long time to process, but in this research is using Hybrid Artificial Neural Networks so the dataset doesn’t need to be too much or large, and doesn’t takelong time to process. Hybrid Artificial Neural Netowrks are a class of flexible nonlinear models designed to mimic biological nervous systems. ANN can solve problems such as high data complexity problems. This is the rationale for implementing the Hybrid Artificial Neural Networks algorithm in the Hate Speech Hastag Classification case with high accuracy.