

ABSTRACT

Curriculum vitae as a document containing a candidate's life history about work experience, education, skills and even achievements of candidates who are applying for a job is an initial document that will be used by the human resource management team to conduct administrative selection for certain positions in their organization. However, this process faces various obstacles in daily practice, there are a number of curriculum vitae that do not match the positions opened in an organization. This condition makes the human resource management team silent in conducting the selection, the current solution is to use Google Form as a tool in the recruitment process, so that the human resource management team can filter keywords that match the open position, but the current solution does not fully meet the needs of the human resource management team. In this study, a Named Entity Recognition model was developed which is expected to be able to extract entities in the curriculum vitae and job requirements. The results of this study show quite good model performance during the training process with an F1-Score value reaching 84.71%, Precision of 86.63, and Recall 83.00. In addition, the training time used in this study is quite long, where most training scenarios take more than 200 minutes with a maximum number of epochs reaching 973. After carrying out the training process, the model was tested using test data both before and after deployment using the Streamlit framework. After testing using the Streamlit framework, the model showed quite good performance in extracting entities in the curriculum vitae category with the majority of F1-Score, Precision, and Recall touching 1.00. However, this is in contrast to the job needs category, most of which experienced a decline when compared to testing before placement. Therefore, it is necessary to improve the performance of the model in extracting entities in the job needs category after implementation. This study also recommends the use of a balance of data between entities and deeper exploration of hyperparameter tuning to improve model performance.

Keywords: *Human Resource Management, Curriculum Vitae, Job Requirement, Similarity, Named Entity Recognition, spaCy, Fine Tuning*