



PROJECT REPORT
THE IDENTIFICATION AND CLASSIFICATION OF
MICROPLASTICS BY FTIR USING GAUSSIAN MIXTURE
AND NAIVE BAYES

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ABSTRACT

Microplastics has become more widely discussed recently. Detecting microplastics can be done using Fourier Transform Infrared Spectroscopy (FTIR). The results provide an absorption band that must be translated into a polymer. However, these results have different sizes of data, varied data, and take a long time to translate if done manually. This can be solved using Gaussian Mixture and Naïve Bayes by modifying the preprocessing to create same-sized data. The results are preprocessing which succeed in equalizing the length of the data, having good performance in the means value which is likely the same as the reference and having high accuracy, also being able to be used as supporting data when manual matching is done.

Keyword: microplastics, FTIR, classification, gaussian mixture, naïve bayes

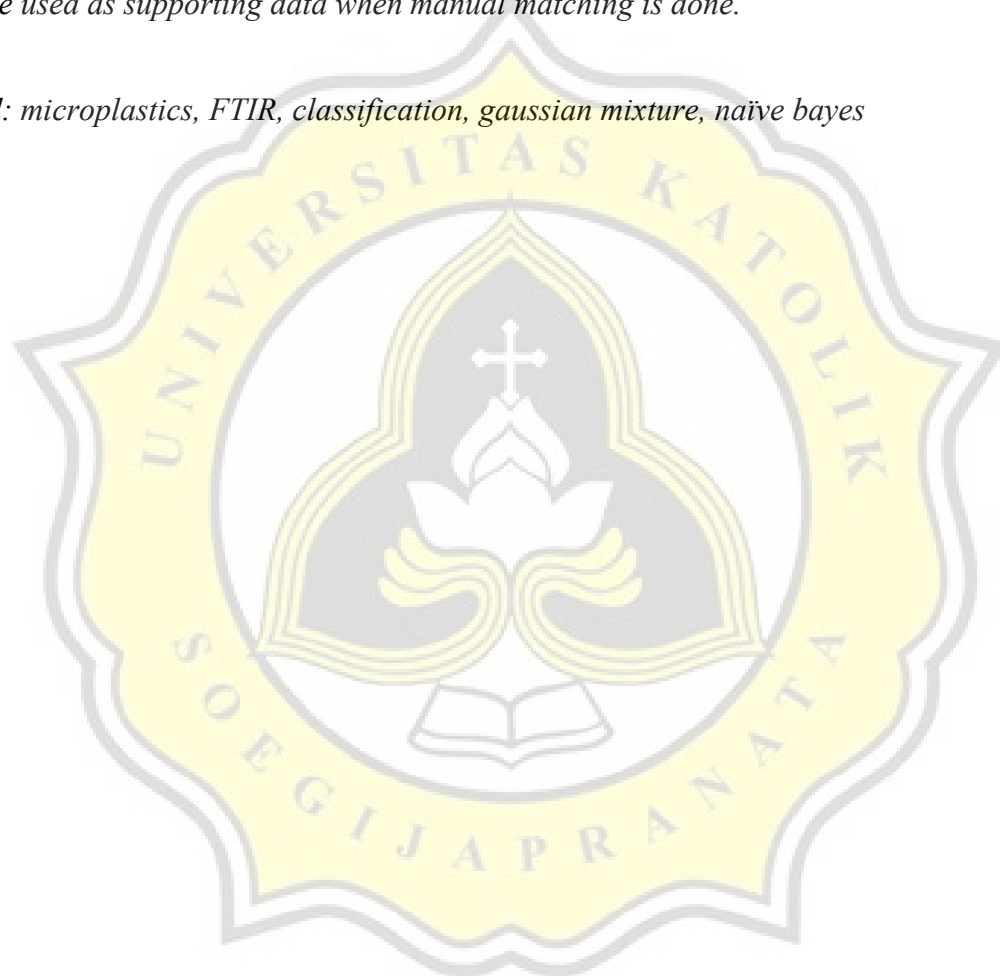
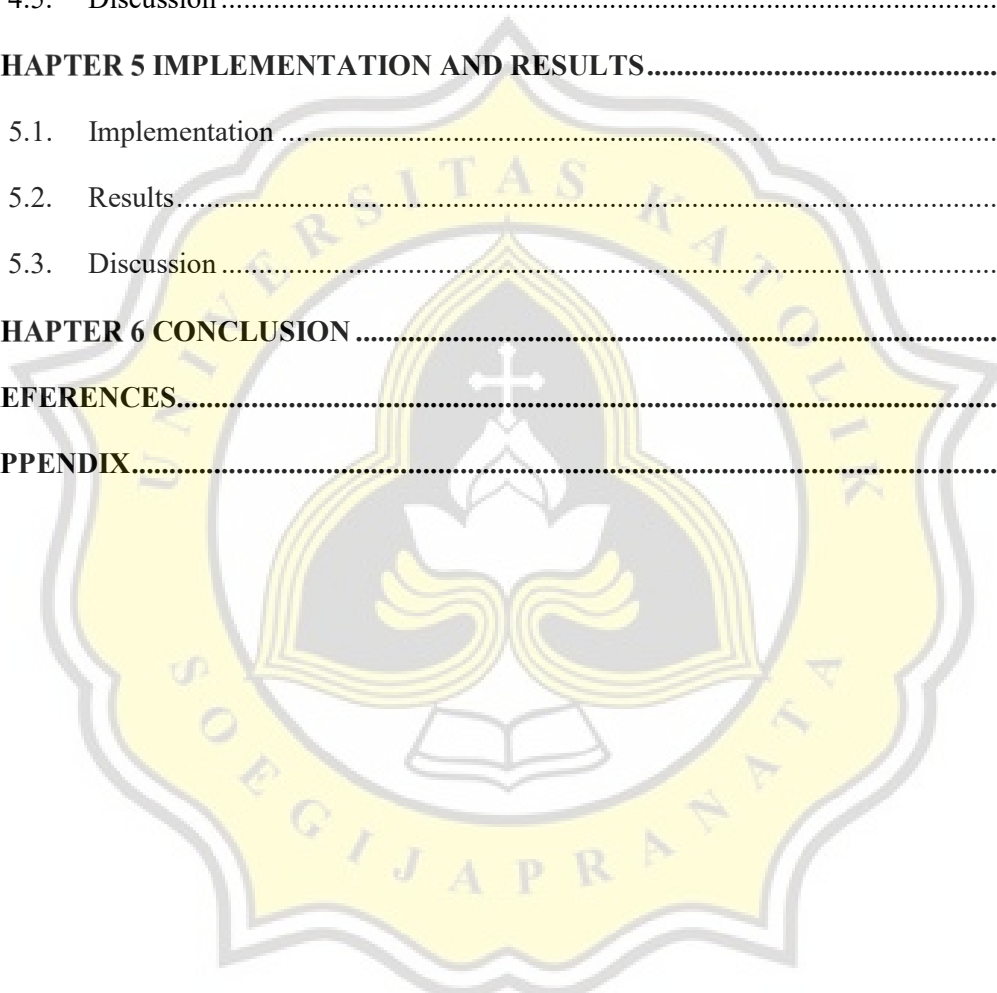


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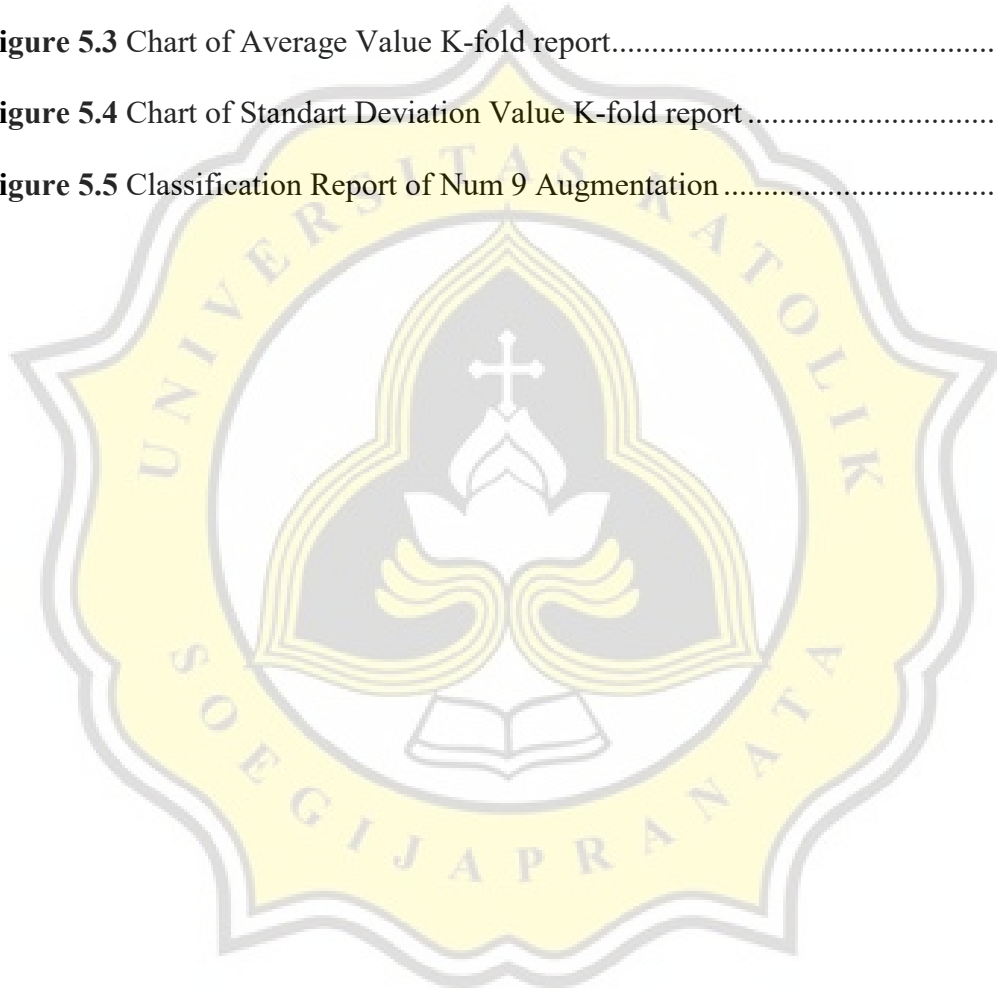
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