

Abstract

This method is based on data analysis and statistics using machine learning algorithms, each new data will be evaluated using predictive methods for decision making in predicting damage. The Internet of Things (IoT) is used for data retrieval and utilizes the ThingSpeak platform as a communication path to send data to the server. The machine learning algorithm that will be applied as predictive maintenance in this Final Project is a clustering k-means algorithm. The K-Means clustering method was chosen because of its simplicity in implementing and its ability to provide a good approximation. The system works by using sensor data that is processed and processed by the K-Means clustering algorithm to produce predictive data on the threat of damage to the 1 phase induction motor engine. Based on research using a predictive maintenance prototype device that uses the K-Means clustering method to have test results with an accuracy level range of 90% to 99%.

Keywords: Induction Motor Engine, Predictive Maintenance, Internet of Things, Clustering K-Means