Abstract This study proposes the performance of machine learning to classify air pollution based on specific attributes using the Decision Tree and Neural Network classification methods. The data used is DKI Jakarta air condition data from 2016 to 2021. The results show that using the Decision Tree and Artificial Neural Networks method gives this study excellent accuracy for prediction classification from 2024 to 2026. In 2024 the Decision Tree and Neural Network models get 98% and 94% accuracy. In 2025 the Decision Tree and Neural Network models get 99% and 93% accuracy, respectively. In 2026 the Decision Tree and Neural Network models get an accuracy of 94% and 93%, which can be seen from the Decision Tree model, which is superior to the Artificial Neural Network with a difference of 1% to 6%. The evaluation model focuses on the results of classification accuracy and the prediction map for DKI Jakarta, which is implemented based on the prediction results of the two models used. The contribution of this research is to provide information about the Decision Tree method, which is a method that is superior to the Artificial Neural Network method in obtaining model performance results on air pollution prediction maps.

Keywords: air pollution, prediction map, decision tree, artificial neural network, jakarta