

## Peningkatan Kinerja AMG8833 sebagai Thermocam dengan Metode Regresi AdaBoost untuk Pelaksanaan Protokol COVID-19

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### Abstract

One way to prevent the spread of the COVID-19 virus is to check body temperature regularly. However, checking body temperature manually by directing the thermogun at someone's face is still often found. The proposed research implements the use of the AMG8833 thermal camera to detect a person's body temperature without making any contact. The function of the AMG8833 is not to detect body temperature, but to detect temperature in general. Therefore, to detect body temperature with AMG8833 calibration using regression is needed. The purpose of this research is to improve the performance of AMG833 as a thermal camera with AdaBoost regression. AdaBoost is a type of ensemble learning that uses several Decision Tree models. For face detection, the system uses the Haar Cascade method. The test results show that the Decision Tree model produces an R-Squared value of 0.93 and an RMSE of 0.21. Meanwhile, AdaBoost succeeded in improving the performance of the regression model with a higher R-Squared value and a lower RMSE value with values of 0.95 and 0.18, respectively. The test results for sensitivity are 93.3% and specificity is 100%.

**Keywords:** COVID-19, AMG8833, AdaBoost, haar cascade, r-square, root mean square error.

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