Implementation of Monitoring and Prediction of Humidity, Temperature, and Light Using Gaussian Process Regression (GPR) for Orchid Green House in Lembang

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Abstract— **A green house is a controlled environment for growing plants. Nelson defines a greenhouse as a building for plant cultivation, which has a translucent roof and wall structure. With the Gaussian process regression method, orchid cultivation can grow well by monitoring soil moisture, the light needed and the temperature suitable for orchid plant growth. The Mean Absolute Error formula or method is a measurement of the accuracy of the prediction model. Mean absolute error shows the result of the average value of the absolute or absolute error of the original value with the predicted value. Then testing is carried out using the coefficient of determination formula, this formula is an important measure in regression, because it can inform whether or not the estimated regression model or the implementation of monitoring and prediction on humidity, temperature, and light using gaussian process regression (GPR) for orchid green houses in Lembang. To determine the accuracy of gaussion process regression (GPR) in predicting humidity, temperature, and light. At this stage, a report will be prepared related to the research being carried out, the report will use methods according to the design of scientific writing.**

Keywords— *green house, gpr, prediction, iot*