

## **Abstract**

Air temperature is one of index of the thermal energy of the atmosphere. Because of it air temperature on the surface of earth is a crucial parameter for understanding the boundary layer climate of certain area. Bayesian network method is one of method in statistics which is depend on classification principal. Bayesian network can estimate the air temperature on the area using Climatology data.

In this final exam Bayesian network graph produced by factorial design algorithm. The architecture of Bayesian network graph used for testing and forecasting the air temperature. Bayesian network do statistical calculation depend on the input variables are humidity, air pressure, rainfall, sunshine radiation, and the wind. Output expected is air temperature estimation on the next day.

From the research, we can interpreted that forecasting system of air temperature can produce result of testing more than 80%.

**Keyword :** Bayesian network, air temperature, climatology, factorial design.