Distance and Areas Weighting of GWR Kriging for Stunting Cases In East Java

**Deby Ardianti1, Henny Pramoedyo2, Nurjannah3**

1,2,3Departement of Statistics Faculty of Mathematic and Natural Sciences, Brawijaya University, Indonesia

Email: [ard.dianti@gmail.com](mailto:ard.dianti@gmail.com)

**Abstract**

Spatial heterogeneity shows the characteristic location from one location to others location and it is the main assumption in Geographically Weighted Regression. The location becomes a weight on GWR model, There are two groups of location weight namely based on distance and area. The weight considers the closeness between the location. The accuracy weighted is needed because the weighting represents the data location. The aim of this research was to get a suitable weighting method for stunting data. This research used secondary data about stunting and the influence factors of stunting such as coverage visiting of pregnant women (K1), consumption of FE tablet, exclusive of breastfeeding, immunization coverage, and clean & health behaviour. Those data obtained from the Healthy Ministry of East Jawa.Based on the results of this research show that the goodness weighting for GWR modell is Adaptive Bisquare Kernel (distance weighting). The predicted mapping stunting is showed by interpolation Kriging with a range of 27% to 49,5%.

**Keyword:** GWR; weighting; distance; area;stunting