

## **ABSTRACT**

*Reducing stunting rates is a key priority in the Sustainable Development Goals (SDGs) to improve public health. The Indonesian government recorded a decline in stunting prevalence from 21.6% in 2022 to 21.5% in 2023, with a national target of 14% by 2024. East Java Province reported a stunting prevalence of 17.7%, indicating ongoing challenges in achieving equitable prevention programs. This study analyzes factors potentially exacerbating stunting, including the percentage of low birth weight infants, children aged 0–23 months not exclusively breastfed for six months, households without access to clean drinking water and proper sanitation, populations without health insurance, and toddlers without complete basic immunization. Outliers were identified that may affect the accuracy of regional clustering analysis. The Fuzzy Possibilistic C-Means (FPCM) and K-Medoids clustering methods were applied to classify districts/cities in East Java based on these factors. Evaluation using the Silhouette Coefficient showed that K-Medoids outperformed FPCM, with a score of 0.3268 (two clusters), compared to 0.2740 for FPCM (also two clusters). The first cluster consisted of 30 regions, while the second included 8 regions, indicating better internal consistency with the K-Medoids method.*

**Keywords:** *Stunting, Fuzzy Possibilistic C-Means, K-Medoids, Clustering, East Java, Silhouette Coefficient*