

ABSTRACT

The development of Nusantara Capital City (IKN) as a smart city has sparked public debates on social media. Unstructured public opinion data holds valuable insights but has not been fully utilized in decision-making. This study aims to analyze public perceptions of IKN to align its smart city development with community expectations.

The smart city concept by Giffinger et al. (2007) is used to map public perceptions into the dimensions of Smart Economy, Smart Governance, and Smart Mobility. Empirical findings are reviewed based on the Nusantara Smart City Blueprint to provide comprehensive information..

A descriptive quantitative approach is used, with data collected from the X social media platform. The Aspect-Based Sentiment Analysis (ABSA) method is applied using the IndoBERT model, effective in sentiment analysis of Indonesian through a two-stage pipeline: fine-tuning IndoBERT for aspect and sentiment classification. A Data-Centric AI approach ensures high-quality training data through hybrid labeling with Cleanlab.

The analysis shows dominant negative sentiment in the Smart Governance dimension, focusing on budget transparency and bureaucracy. The Smart Economy dimension reveals a mix of optimism and skepticism regarding economic impact, while the Smart Mobility dimension shows neutral sentiment about infrastructure development.

This study highlights the importance of public trust for stakeholders. Recommendations include implementing an inter-agency interactive dashboard, open data portals, and two-way communication channels to improve transparency, accountability, and public participation, in line with sustainable smart city principles.

Keywords: *Smart city, Aspect-Based Sentiment Analysis, IndoBERT, public perception, Ibu Kota Nusantara.*