

## ABSTRACT

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*The Central Statistics Agency (BPS) is a government agency that runs in the household economic and social needs. Every two years BPS conducts Susenas (National Socio-Economic Survey) to find out how to predict poverty levels in Indonesia. Every year BPS is tasked with providing information on how the community is in their economic and social fields. In this very rapid development, there are many methods to determine predictions of poverty levels. one of them is with the rapid development of E-commerce in Indonesia and is able to determine the level of poverty in Indonesia today. Therefore, the authors built an application to complement BPS in predicting poverty levels in an area, namely the application of poverty rate prediction based on e-commerce data using the K-Nearest Neighbor method and the selection of Information Theoretical Based features. This application was built using the waterfall model, using the Python programming language and the MySQL database. With this application, it is expected to be able to complete the BPS Census and Susenas in predicting poverty levels in an area.*

*Keyword : The Central Statistics Agency (BPS), waterfall, Python, MySQL, K-Nearest Neighbor, Information Theoretical Based.*