# OPTIMIZING TRUE WIRELESS STEREO SELECTION

# USING TOPSIS METHOD

**UNDERGRADUATE THESIS**

**Submitted as one of the requirements to obtain**
**Sarjana Komputer**

**By:**

**HANIYAH PUTRI FAJRI SANNI**

**012201900020**

**FACULTY OF COMPUTER SCIENCE**

**INFORMATION SYSTEM STUDY PROGRAM**

**CIKARANG**

**JUNE 2023**

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## ABSTRACT

The current market is flooded with a wide variety of True Wireless Stereo (TWS) options, which presents a wide range of choices for consumers when it comes to buying TWS earbuds. This large number of choices has caused a frequent problem for people who want to buy TWS earbuds, namely confusion and hesitation among consumers. The different TWS models vary in terms of features, specifications, and price points, making it quite difficult for consumers to determine which option best suits their needs. Factors such as sound quality, battery life, convenience, connectivity and other additional features also further complicate the decision-making process. As a result, consumers often end up unsure which product will best suit their needs.

To compare True Wireless Stereo brands and choose the best according to consumer needs, we can use a technique for order preference based on similarity to ideal solutions (TOPSIS) multi-criteria decision-making method (MCDM). In general, this method works by assessing the weight of each criterion which is the determining factor in a case study. TOPSIS calculations can then be run using these weights.

The purpose of this method is to find a more prioritized value from this case study, which is also called ranking. In this study, researchers determined several criteria as a comparison including; Sound Quality, Noise Cancellation, Battery Durability, Device Compatibility, and TWS prices are then calculated using the TOPSIS method. Later, the results of this study will be the best True Wireless Stereo recommendations, which can later be considered strong enough for consumers to choose True Wireless Stereo based on their needs in order to produce accurate, effective and efficient information.



*Keywords*: *TOPSIS Method, True Wireless Stereo Selection, MCDM, Decision Support System.*

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The author realizes that the writing of this report is far from perfect. Therefore, suggestions and constructive criticism are highly expected for the improvement of this final project.

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