Sizing System Shirt Dezign for 8-10 Years Indonesian Children Using Elbow Method and K-Means Clustering

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Abstract

Clothing is the most important in human need, starting from the babies to adults, they need clothes for their life. The greater the number of clothing sizes will help consumers to choose which size is right for their body, but if there are too many clothing sizes, it is also less profitable for the manufacturer.

This research will provide new clothing sizes and the consumers can choose the appropriate size for their own body. The k-means clustering method will help to determine the optimal number of clothing sizes through the elbow found from the processed centroid results.

It was found that there were 7 suggested clothing sizes for both men and women where the sample used was the body size of children aged 8-10 years. The results obtained get an aggregate loss value that is less than the ideal value where this is an ideal calculation in the sizing system and the cover factor value is greater than the existing SNI system. So the proposed size standard found is said to be more effective as a guide for children's clothing in Indonesia.

Keywords : *Sizing system, K-Means Clustering, Elbow Method*