



ANTHROPOMETRIC MEASUREMENTS PREDICTION MODEL FOR MALAYSIAN CHILDREN IN CLOTHING INDUSTRY

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ABSTRACT

Clothing is essential for a human being as it is one of the necessities for humans to cover themselves from adverse climate conditions. On average, approximately 3.4 percent of the monthly household consumption expenditure of Malaysians went to clothing and footwear. Aware of these importance, children's clothing has been chosen to focus on this study. Right-fit clothing is essential for children since it is related to the conformity of clothes to the body with active routine activities. Therefore, this study aims to increase the accuracy of anthropometric measurements prediction for children using key body dimensions, namely weight and height. The results revealed that the Neural Network-based prediction model using weight and height successfully predicted the other 49 anthropometric measurements with a minor percentage of errors. This model is expected to solve the issue of clothing "misfits" especially in online purchasing, to identify the correct clothing size. The physical contact for manual measurements and try-on clothes is also less practical and can be avoided due to the recent Coronavirus outbreak (COVID-19). At the end of this paper, several recommendations have been made for reference of the future scholars.

Keywords: *Anthropometric Measurements; Neural Network; Children Clothing; Right-Fit Clothing*