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Automatic Dress Size Detection for Online Shopping

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Abstract: *This project addresses the challenge faced by online shoppers in accurately determining dress sizes, leading to dissatisfaction and high return rates. To mitigate this issue, the proposed system introduces an automated approach to dress size detection, integrating human detection and landmark extraction techniques using YOLOv7. The system aims to enhance the online shopping experience by providing shoppers with personalised dress size recommendations based on their body measurements. By leveraging the real-time object detection capabilities of YOLOv7, the system detects human bodies within input images, subsequently extracting key landmarks such as shoulder width, bust size, and waist circumference. These measurements are then utilised to estimate the most suitable dress size for the user, thus addressing the problem of ill-fitting purchases in online shopping. Evaluation of the system's performance involves accuracy metrics and usability testing to validate its effectiveness and reliability in automating dress size detection for online shoppers. Through this innovative solution, online retailers can significantly reduce return rates and enhance customer satisfaction, while shoppers can enjoy a more convenient and personalised shopping experience.*

Keywords: Machine learning, Deep learning, Neural Network, Convolutional Neural Network, YOLOv7

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