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Generative Fashion Design Web Platform

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Abstract: This paper presents a web-based real-time virtual try-on system that uses computer vision and machine learning techniques to enhance the online shopping experience. Leveraging MediaPipe for pose estimation, remove.bg for background removal, and a custom fit score metric, the system overlays 3D images onto users via webcam input. Shirt images are dynamically fetched using SerpAPI based on user prompts. The system is implemented using Flask and WebSockets for efficient real-time video streaming and feedback. Experimental results demonstrate the practicality and accuracy of the proposed try-on approach in delivering a realistic apparel fitting experience.

Keywords: web-based real-time virtual try-on system



