

組別 Team ID: 202520

專題屬性 Category: 多媒體應用 (Multimedia Applications)

專題名稱 Project: 2D服飾穿戴

(2D clothing and accessories)

一、指導老師 Advisor: 陳靖國老師 (Prof. Jeang-Kuo, Chen)

二、組員 Team members: 劉洧辰(11114045)、葉士宏(11114048)、  
許丞湘(11114099)、田喆緯(11114117)

三、系統環境 System environment:

(一) 軟體 Software:

作業系統 Operating System: iOS 26

語言 Programing language: Pythonista 3

開發工具 Toolkits: pythonista3、chatgpt、github、

(二) 硬體

Hardware: iPhone。

四、簡介:

(一) 系統簡述

本專題專注於開發基於生成式AI的2D虛擬試穿系統。用者僅需上傳自己的全身以及半身照片，還有想搭配的服飾商品圖，系統即可透過深度學習技術，自動生成使用者穿上該服飾的高擬真影像。這項技術旨在彌補傳統線上購物「無法實際試穿」的痛點，顯著改善消費者的購物體驗。

(二) 特色

- 操作簡易: APP 簡單明瞭的 UI 介面設計讓使用者能夠輕鬆上手。
- 生成的影像在視覺上應達到自然、無明顯破綻的效果，服飾的紋理與圖案能被準確保留。
- 完成一個原型系統，能夠接收使用者照片與服飾照片，並成功生成虛擬試穿影像。
- 系統能初步應對不同的人體姿態（如正面、微側面）以及不同類型的服飾（如上衣、褲子、帽子、配件等...）。

五、Introduction:

Introduction

This project focuses on developing a 2D virtual try-on system based on generative AI. Users only need to upload full-body and half-body photos of themselves, along with images of clothing items they wish to wear. The system then uses deep learning technology to automatically generate a highly realistic image of the user wearing the clothing. This technology aims to address the pain point of traditional online shopping—the inability to actually try on clothes—significantly improving the consumer shopping experience..

Features

- **Easy to operate:** Simple and clear UI design of the APP allows users to get started easily.
- The generated images should appear natural and flawless, with the textures and patterns of the clothing accurately preserved..
- Complete a prototype system that can receive photos of users and clothing and successfully generate virtual try-on images.
- The system can initially handle different human postures (such as frontal and slightly side views) and different types of clothing (such as tops, pants, hats, accessories, etc.).