Virtual Eyelash Try On – Tech Stack Documentation

Project Overview

Virtual Eyelash Try On is a web-based application that allows users to virtually try on eyelashes. Users can upload images, select eyelash styles, and adjust placement parameters like size, height, and position. Moreover, the application also features a recommendation system to provide users with eyelash recommendations based on their provided image. The project integrates image processing and AI-driven face detection to provide realistic virtual try-ons.

Technology Purpose

Python	Core backend programming language. Handles image processing, API logic, Recommendation System and integration of MediaPipe FaceMesh for eyelash detection.
Flask	Web framework used to create RESTful API endpoints for image upload, eyelash application, and adjustment operations.
MediaPipe	Provides face mesh detection to identify eyes and facial landmarks for accurate eyelash placement.
OpenCV	Image processing library used for manipulating uploaded images, overlaying eyelashes, and generating output images.
NumPy	Handles numerical operations and manipulations for image arrays.
Render	Deployment platform hosting the API for production access.
Next.js	Frontend interface for users to upload images and interact with the API.
Vercel	Platform used to deploy the frontend of the application.