

1) Colour Extraction: • The uploaded image is resized, and dominant colours are extracted using K-Means clustering. • The resulting dominant face colour is converted into a hex code for further processing. 2) Colour Matching: • The extracted face hex code is compared to a list of foundation hex codes. • Delta E (CIE76) is used to calculate colour differences, selecting the top 6 closest matching shades. 3) Product Search: • The face hex colour is used to query the Sephora product API. • User preferences like price range and sorting (e.g., by popularity or rating) are applied. 4) Results Display: • The matched foundation products are retrieved and displayed. • Product details like price, reviews, rating, and availability are included. 5) Gemini colour Analysis: • The face and eye hex colours are sent to the Gemini model for personalized colour and fashion recommendations. • The model suggests suitable clothing and colour palettes to complement the user's complexion