**COLOUR PALETTE GENERATOR**

**ABSTRACT**

A **real-time color palette generator** is an interactive tool designed to assist designers, developers, and creative professionals in generating harmonious color schemes dynamically. This project focuses on creating a seamless user experience where users can input color values, upload images, or select base colors, and instantly receive a corresponding color palette based on various color theory principles such as analogous, complementary, and monochromatic relationships. The system provides immediate visual feedback as users adjust inputs like RGB values, hex codes, or images, enabling them to explore different color combinations in real time.

In addition to user inputs, the generator allows for the customization of color relationships, providing a wide range of palette types (e.g., warm, cool, pastel, etc.) that cater to different design needs. The result is an intuitive, efficient tool that aids in the creative process, offering users a visual and interactive platform to experiment with color schemes.

**KEYWORDS:**

Real-time color palette, Color theory, Interactive tool, RGB, hex codes, Color extraction.

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