



PROJECT TITLE

COLOUR DETECTION

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AGENDA

- ▶ Problem statement
- ▶ Project Overview
- ▶ End User
- ▶ Our Solution And Proposition
- ▶ Key Features
- ▶ Modeling Approach
- ▶ Results

PROBLEM STATEMENT

- ▶ Develop algorithms or models capable of accurately identifying and reproducing colors within generated images or designs.
- ▶ This task typically includes training models to recognize and understand different color representations, such as RGB or hexadecimal codes and to apply appropriate colors to various elements within generated content based on input parameters or desired outcomes.

PROJECT OVERVIEW

- ▶ Color detection typically involves using computer vision algorithms to identify and analyze the colors present in an image or video.
- ▶ These algorithms process the pixels in the image to determine the dominant colors or specific colors of interest. Common techniques include clustering algorithms like k-means or thresholding methods to segment regions of interest based on color characteristics.
- ▶ Once the colors are detected, they can be used for various applications such as object recognition, image segmentation, or even quality control in industrial settings.

END USER

- ▶ User Interface (UI)
- ▶ Camera Integration
- ▶ Color Detection
- ▶ Optional Features

PROPOSITION

- ▶ The process of identifying and analyzing colors within a proposition or statement.
- ▶ This could involve identifying color-related terms, such as “blue,” “red,” or “green,” within the proposition and then interpreting their significance within the context of the statement.

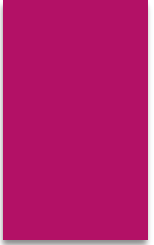
WOW FACTOR

- ▶ Real-time color detection
- ▶ Color-based object recognition
- ▶ Color trend analysis
- ▶ Accessibility

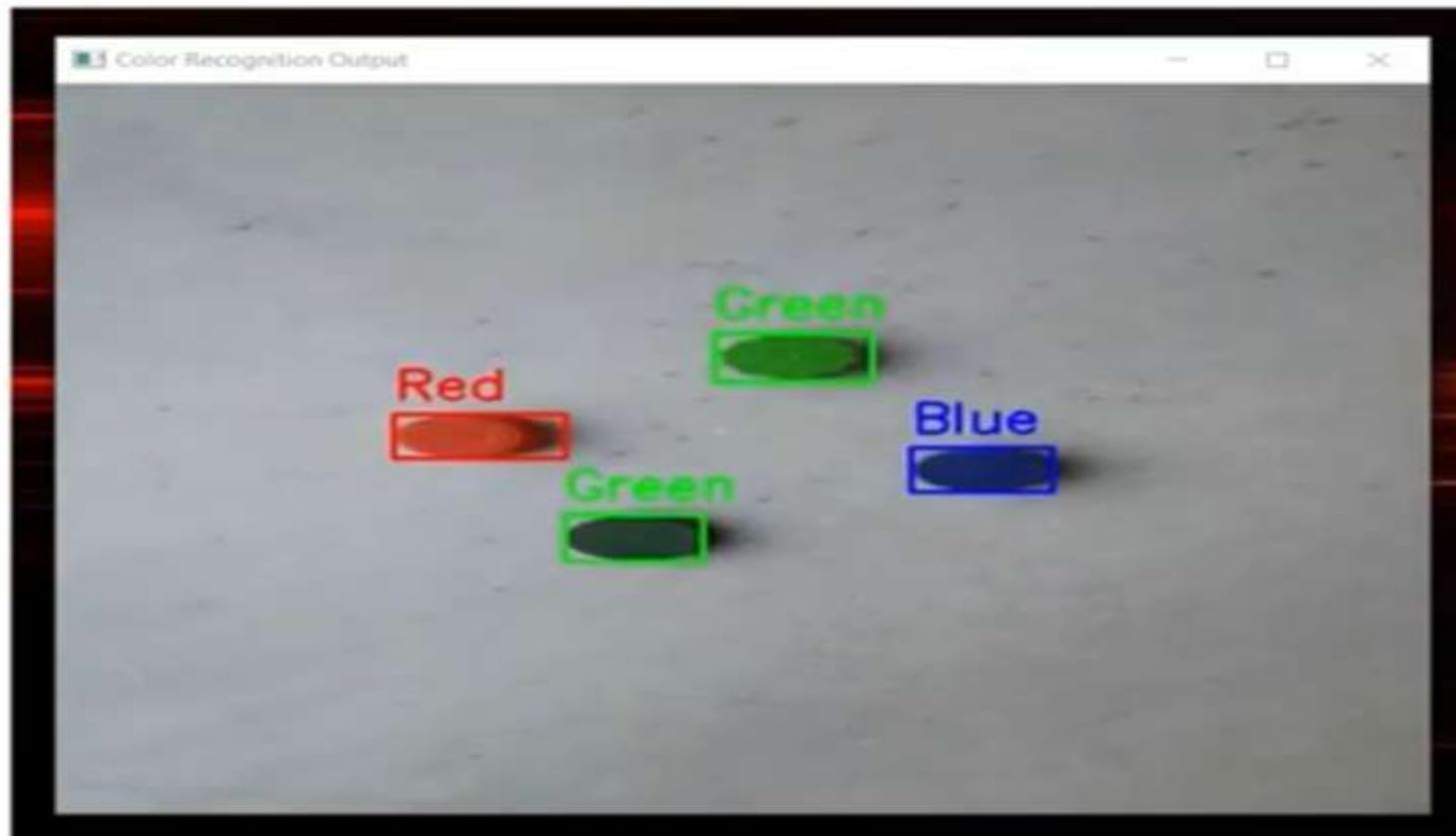
These factor Collectively contribute to the Wow factor of color detection

MODELLING APPROACH

- ▶ **Image Acquisition:** Obtain images or video frames containing objects whose colors you want to detect.
- ▶ **Preprocessing:** Clean and preprocess the images to enhance color features and remove noise. This may include tasks such as resizing, noise reduction, and color space conversion.
- ▶ **Feature Extraction:** Extract relevant features from the images that represent color information effectively. Common color features include color histograms, color moments, or color descriptors like RGB, HSV, LAB, etc.

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- ▶ **Model Selection:** Choose a suitable machine learning model or algorithm for color detection. This could range from simple methods like k-nearest neighbors (KNN) or support vector machines (SVM) to more complex deep learning models like convolutional neural networks (CNNs).
 - ▶ **Training:** If using a machine learning model, train it using a labeled dataset containing images with annotated color labels.
 - ▶ **Deployment:** Deploy the trained model to perform color detection on new unseen images or video streams. This could involve integrating the model into an application or system for real-world use.

RESULT



CONCLUSION

- ▶ color detection technology offers numerous practical applications across various industries, including image processing, automotive safety, healthcare, and agriculture. By accurately identifying colors, this technology enhances efficiency, improves decision-making processes, and enables automation in numerous tasks. With ongoing advancements in machine learning and computer vision, the potential for color detection systems to become even more accurate and versatile is promising, paving the way for further innovation and integration into everyday life.



THANK YOU