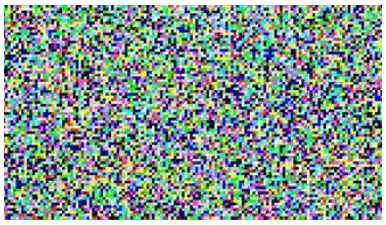
Realm of Pixels and Color Models

🖼️ What are Pixels?

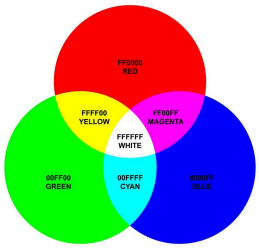


• Pixels are tiny squares of color that make up digital images.

• Each pixel has color information stored as numerical values.

• Higher pixel counts = clearer, more detailed images.

🌈 RGB Color Model

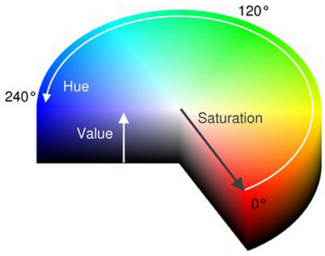


• Used in screens & digital displays.

• Colors are formed by combining Red, Green, and Blue light.

• Example: (255, 0, 0) = Pure Red

🎨 HSV Color Model



• Stands for Hue, Saturation, and Value.

• Used for color adjustments in image editing.

• Example: (0°, 100%, 100%) = Pure Red

🖨️ CMYK Color Model

• Used in printing.

• Colors are formed by mixing Cyan, Magenta, Yellow, and Black.

• Example: (0%, 100%, 100%, 0%) = Pure Red

Reflection.

During this quest I explored how pixels form digital images and how different color models impact color representation. Creating the visual poster helped me simplify the concepts while reinforcing my understanding of how RGB powers digital screens, HSV is used for color adjustments, and CMYK is essential for printing. This project also gave me more awareness of how AI relies on high-quality image data for applications like gaming and other digital media. This experience strengthened my knowledge and allowed me to creatively show the key image processing concepts in a clear way. I learned how pixels are used to create the images and how RGB can create all the digital screens that we are using everyday. I also found out that it isnt RGB that creates all the color it is HSV that creates all the color adjustments that we can see on our screens which is very interesting to me.