

PROPOSAL TITLE: DIGITAL IMAGES AND 3D

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I plan to talk about the mathematics behind digital images and how it relates to 3d images. When an image is displayed in a computer, each pixel is represented by three numbers, a red, blue and green value. When that images is manipulated by a computer program, the values specifying the color of the pixels are modified. For instance, a color image is turned into a black and white image by changing the red, green and blue values of each pixel so that the three values are the same. A 3d image is created by taking the blue values from one image and the red and green values from another and combining the image.

The exercises that I will create will be about manipulating binary values with bit operations and how different colors are represented by mixing the red, green and blue values.