**Basics**

1. B/W images can be represented in grid where each pixel spans from 0-255 (black to white)
2. Color Images have RGB component, each of which spans from 0-255 (0 meaning no color)
   1. Note: (0, 0, 0) is Black
3. The colorization task is basically:
   1. Colorization Task (Gray-scale Image) = Colorized Image

**Alpha**

1. In LAB,
   1. L = Lightness (0 to 100)
   2. A = spectrum of green-red (-128 to +128)
   3. B = spectrum of blue-yellow (-128 to +128)
2. Note: 94 % of human eye cells determine brightness and only 6 % color. This concept is used in alpha.
3. In alpha, we use labels as [a b] for input training data L

**Beta**

1. Alpha fails to give proper output for images it is not trained upon.
2. It is important for the model to learn generalized characteristics rather than memorizing information from one image.