**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 on.