Three Color Theory of Vision

Photoreceptors – Responsive to light

Rods have one-to-one correspondence between light and space

Cones have a many-to-one correspondence between space units on retina per photoreceptor

Ganglion Cells – Responsive to photoreceptors

Have many-to-one correspondence with retinal cells, and fire in different ways based on patterns presented on rods and cones that propagate to it

Visual Processing does not have dense connectivity

Shine a light at the periphery of neurons in receptive field of ganglion 🡪 no changes in ganglion response

Do blurry images carry lower-level information or higher-level information

* Retinal cells, especially rods of retina encode lots of details
* Ganglion cells, encode patterns in their receptive field (more blurry, higher abstraction)
  + Is abstraction the process of taking a many dimensional thing and moving it into a single dimensional thing

Gaussian Filter – Replace each pixel value in an image by taking convolution of two arrays

1. Context array – pixel values around a given pixel
2. Gaussian 2d curve – normal distribution in two dimensions