Outline
CS376 Computer Vision
Monday, February 7, 2011

Color

Measuring color

- Spectral power distribution
  - Definition, examples
- Color mixing
  - Additive
  - Subtractive
- Color matching
  - Motivation
  - Experiment setup
  - Choice of primaries
  - Metamers
  - Grassman’s laws for additive matching
  - Computing primary intensities for a test light

- Color spaces
  - Definition of primaries
  - Linear, non-linear examples: RGB, XYZ, HSV
  - Distance in color space
    - “just noticeable differences”
    - Uniform color spaces

Perception of color

- Human photoreceptors
  - Rods, cones
  - Trichromatic nature
  - Environmental effects, adaptation; Color matching vs. color appearance

Using color in vision systems

- Color histograms for CBIR
- Color for skin detection
- Segmenting distinctive colors for robot vision

Reminder: Pset 1 due Mon Feb 14, 11:59 PM