Day 1: RGB and Synesthesia

Python Activity

RGB and Synesthesia

- Learning Objectives
  - Sensorial
    - Be able to identify the color of a pixel based on its “sound”.
  - Technical
    - Getting familiar with Python and IPython notebooks.
    - Image manipulation

Activities

1. Download the required files:
   - Insert instructions here
2. Intro to Python and RGB:
   - Open Anaconda program and open Jupyter
   - Open and work through the notebook Computation_with_IPython_notebooks.ipynb
     - If you don't have all the needed packages try `pip install <package_name>`
3. Intro to Synesthesia:
   - Open and work through the notebook RGB_and_Synesthesia.ipynb in Jupyter
4. Create your own function:
   - Open RGB_Synesthesia_EMPTY.py and fill in functions (in spyder?).
   - Change the image and try to guess the color of a region.
   - You can also change the sounds to different instruments if you would like.

Install libraries on your own computer

If you want to try the scripts and notebooks in your own computer you can follow these instructions in Mac:

- Get python and some modules
  - Go to https://www.continuum.io/downloads#osx
  - Download graphical installer python 2.7 version.
  - Open a terminal and type
    - `pip install pygame`
    - `pip install imageio`
    - `pip install pydub`
    - `pip install jupyter`
- Run jupyter notebook:
  - In a terminal type `jupyter notebook`
  - Find and select the desired .ipynb

Some notes on iPython notebooks

Every time you open a notebook the kernel should be Python 2, or Python or Python[default] (it would depend on how many python installation you have and your jupyter config file). If you want to select a kernel go to kernel $\rightarrow$ change kernel $\rightarrow$ and select the correct python version.

If are not familiar with IPython notebooks a couple of minutes of the following video could be useful (after the minute 4:00, before 5:30):

https://youtu.be/irJVUeYIJgU?t=4m

It is about the basics: how to run, stop, change kernels, and have a tour of the interface.