**System Setup Guide**

For Lecture 1: Installing Cytoscape 3.4 Pre-Release Version

Cytoscape is a Java application and you need the latest version of Java on your machine.

1. 1. Download Java
   1. a. [Java Runtime Environment](http://www.oracle.com/technetwork/java/javase/downloads/jre8-downloads-2133155.html)
   2. b. Currently, Java 8 from Oracle is required
   3. c. Linux Users: May work with OpenJDK, but not fully tested
2. 2. Install Java
   1. a. This should be straightforward. Just double-click the file and follow the instruction
3. 3. Download Cytoscape 3.4 pre-release version. Currently, RC2 is the latest pre-release version: <http://chianti.ucsd.edu/cytoscape-3.4.0-rc2/>
4. 4. Install Cytoscape
   1. a. Just double-click the file and follow the instruction
5. 5. Launch Cytoscape
   1. a. It should be in your Application (Mac) / Program Files (Windows) directory
6. 6. Optional: try tutorials here <http://opentutorials.cgl.ucsf.edu/index.php/Portal:Cytoscape3>
   1. a. The document is a bit old, but still basic concepts are the same

Troubleshooting

* ● Is your Java version correct?
  + ○ Cytoscape requires latest version of **Java 8**
* ● Does your machine have old version of Java?
  + ○ Maybe it is still in use. Please read the document below
* ● Still have issues? Please read this page:
  + ○ <http://www.cytoscape.org/troubleshooting.html>

For Lecture 2: Installing Python and Jupyter Notebook

The second lecture covers some of the topics which require basic Python programming skills. However, we assume you don’t have any real-world Python programming experience. So you don’t have to worry too much about Python coding skills.

Installing Python

**IMPORTANT**

* ● **Python community is still in the middle of transition from version 2 to 3. In this lecture, we will use Python 3.5**
* ● If you are familiar with Python and its toolchain/ecosystem, you can skip this section. Just make sure you have all of the standard tools Anaconda installs by default, such as numpy/scipy, pandas, jupyter notebook, etc.

Before Installing Packages...

Please watch this video before installing the following software packages. This is a great introduction (first few sections are free):

* ● *[Jupyter Notebook for Data Science Teams: Notebook Extensions, SQL Magic, Widgets, and Team Sharing](http://shop.oreilly.com/product/0636920044260.do)* By Jonathan Whitmore
  + ○ ***Installing The Jupyter Notebook And Setup*** is the section you need to watch. This video covers Anaconda and Jupyter Notebook installation.

There are several good introductory videos. I recommend to watch these videos if you want to learn some basic tools used in Python community. (These are all commercial products, but first few chapters are free)

* ● [Introduction to Pandas for Developers](http://shop.oreilly.com/product/0636920047537.do)
* ● [Matplotlib for Developers](http://shop.oreilly.com/product/0636920045632.do)

Step-by-Step Instruction

1. 1. Download Anaconda Distribution
   1. a. There are some versions of Python distributions. I strongly recommend to use Anaconda from Continuum Analytics because it has a lot of scientific computing libraries by default
      * ■ [Anaconda](https://www.continuum.io/downloads) - Make sure to choose **Python 3!**
      * ■ Install Anaconda
   * ○ Double click the file and just follow instructions
2. 2. Open terminal (Mac/Linux) or command prompt (Windows)
3. 3. Test your installation
   * ○ Check python version:
     + ■ Windows: C:\WINDOWS\system32>python --version  
       Python 3.5.1 :: Anaconda 4.0.0 (64-bit)
     + ■ Mac: python --version  
       Python 3.5.1 :: Anaconda 4.0.0 (x86\_64)
4. 4. Install py2cytoscape
   * ○ Type: **pip install py2cytoscape**
5. 5. Download course material
   * ○ All of the course materials are in GitHub repository. If you are familiar with git, you can fork & clone this repo:
     + ■ <https://github.com/idekerlab/tsri-lecture>
   * ○ If not, download the repository to your laptop:
     + ■ <https://github.com/idekerlab/tsri-lecture/archive/master.zip>
     + ■ Unzip it
6. 6. Start Jupyter Notebook
   * ○ **cd** to the course material directory
   * ○ Open terminal and type: jupyter notebook
   * ○ The command above will open a new browser window

Optional Software Packages

These are optional, but I strongly recommend to install these useful tools:

* ● [JSONView](https://chrome.google.com/webstore/detail/jsonview/chklaanhfefbnpoihckbnefhakgolnmc) (Google Chrome Extension)
  + ○ Pretty-formatter for JSON
* ● [jq](https://stedolan.github.io/jq/) - JSON formatter for your terminal