

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. Download Java
 - a. [Java Runtime Environment](#)
 - b. Currently, Java 8 from Oracle is required
 - c. Linux Users: May work with OpenJDK, but not fully tested
2. Install Java
 - a. This should be straightforward. Just double-click the file and follow the instruction
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. Install Cytoscape
 - a. Just double-click the file and follow the instruction
5. Launch Cytoscape
 - a. It should be in your Application (Mac) / Program Files (Windows) directory
6. Optional: try tutorials here <http://opentutorials.cgl.ucsf.edu/index.php/Portal:Cytoscape3>
 - 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](#) 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](#)
- [Matplotlib for Developers](#)

Step-by-Step Instruction

1. Download Anaconda Distribution
 - 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](#) - Make sure to choose **Python 3!**
 - Install Anaconda
 - Double click the file and just follow instructions
2. Open terminal (Mac/Linux) or command prompt (Windows)
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. Install py2cytoscape
 - Type: **pip install py2cytoscape**
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. 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](#) (Google Chrome Extension)
 - Pretty-formatter for JSON
- [jq](#) - JSON formatter for your terminal