DevAHP Jupyter Quickstart

This document will get you up and running Devin Tamayo's Jupyter notebooks that can perform many of the standard AHP pairwise calculations, as well as provide useful visualizations of the results.

1 Installing Jupyter and Python

The DevAHP project uses the Jupyter notebook system and is written in Python. Thus you need to install Jupyter and Python. Luckily there is an easy way to install both With Anaconda:

1. https://www.continuum.io/downloads Download Anaconda
   Make sure you get Python 2.7
2. Install as per usual for your OS

2 Getting the DevAHP Source Code

Jupyter/Python notebooks are simply source code that is run in a Jupyter notebook environment. DevAHP is such a notebook and is hosted on GitHub. To download the code you have two choices:

1. **(Simple Download)** This link click the green button and then click "Download ZIP" and extract it into a folder you can access later. See the image below

2. **(Git Access)**[1] If you want to have git access to the code (in other words, be able to pull the latest changes, and/or submit your
   own bug fixes or new ideas, that is
   very possible. To do this:

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[1] For more information about git, see Introduction to Git Version Control System

a. On windows/mac download the github desktop client from https://desktop.github.com/ and install
b. Go to the github project page and click the green button and choose "Open in Desktop" as in the following screenshot

3 Getting Extra Libraries Needed By Python

We rely on an xlsx python library, in addition to a visualization library called plotly. You need to install those libraries for the DevAHP Jupyter workbook to function.

1. Open a (Command prompt if on windows, terminal if on mac)
2. Run the following command
   a. pip install plotly
   b. pip install openpyxl

4 Running the sample notebooks

1. Launch Jupyter
   a. (Windows 8/10)
      i. Go to search bar
      ii. Type Jupyter, and *Jupyter Notebook* should show up
      iii. Click *Jupyter Notebook* (Note: it could take a minute to start, as it is starting a server and then opening a webpage to talk to that server)
   b. (Windows 7)
      i. Go to the start menu and search for *Jupyter*
      ii. Run *Jupyter Notebook*
   c. (Mac)
      i. Open spotlight (press Cmd-space)
      ii. Type navigator in the search, and click the app
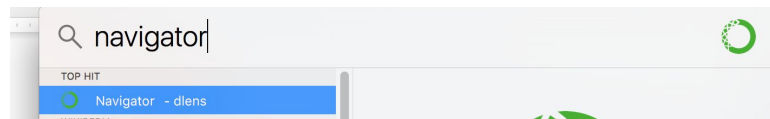
2. Once Jupyter is running, you should have a web browser window that looks something like:

3. Navigate to and open the sample notebooks
4. Maybe include a screenshot of what it should look like
5. Explain how to execute one cell/all cells in a notebook

5 Creating your own notebooks

The process of creating your own notebooks to work on problems is very easy:

1. The notebook **MUST BE IN THE DevAHP directory!**   This is due to how we've structured the python code, sorry.
2. The first cell in the notebook should contain the following lines of code

   ```
   import devahp as h
   import numpy as np
   from plotly.offline import plot
   from plotly.offline import download_plotlyjs,
   init_notebook_mode, iplot
   import plotly.graph_objs as go
   init_notebook_mode()
   ```
3. Then you can use the `h.single_stats()` and `h.group_stats()` functions as demonstrated in the Tutorial.ipynb file in the DevAHP directory.

6 Where to go for help

Our support is handled through a discussion group on gitter.im. You can:
1. See what people are talking about by going to https://gitter.im/isahp/youth-session
2. To post on the discussion group you need a login. You can use a twitter account login if you have one, or a github login (you can create a free account on either as well). Just follow the prompts from the "Sign in to start talking" button on the page https://gitter.im/isahp/youth-session, to create a **free** github account.
3. See the next section on how to sign up for a github account and login to gitter.
4. There are ios and android gitter apps, so you can participate mobily
5. There are desktop clients for mac, windows, and linux at http://gitter.im/apps