Jupyter Notebooks

University of Luxembourg
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Vernon Gayle
University of Edinburgh

Roxanne Connelly
University of York

RUSSELL GROUP

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Jupyter Notebooks

Setting up Jupyter Notebooks can be fiddly. This pdf shows some screen shots and provides a few notes.
It is NOT a comprehensive document on setting up Jupyter Notebooks.
Computers, operating systems, university networks, access and permission vary.
You may need to get help or support from an information technology specialist in your own department or university.

Good Luck.

jupyter

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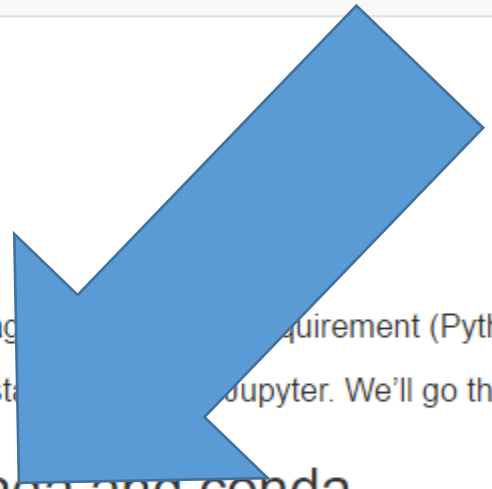
Installing Jupyter

Get up and running with the Jupyter Notebook on your computer within minutes! Follow the instructions below.



Prerequisite: Python

While Jupyter runs code in many programming languag quirement (Python 3.3 or greater, or Python 2.7) for installing the Jupyter Notebook.

We recommend using the Anaconda distribution to inst upyter. We'll go through its installation in the next section.

Installing Jupyter using Anaconda and conda

For new users, we **highly recommen** installing Anaconda. Anaconda conveniently installs Python, the Jupyter Notebook, and other commonly used packages for scientific computing and data science.

We recommend using the Anaconda distribution to install Python and Jupyter. We'll go through its installation in the next section.

- Download Anaconda. We recommend downloading Anaconda's latest Python 3 version (currently Python 3.5).
- Install the version of Anaconda which you downloaded, following the instructions on the download page.
- Congratulations, you have installed Jupyter Notebook. To run the notebook:

```
jupyter notebook
```

https://www.continuum.io/downloads

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Anaconda 4.2.0

For Windows

Anaconda is BSD licensed which gives you permission to use Anaconda commercially and for redistribution.

Changelog

1. Download the installer
2. Optional: Verify data integrity with MD5 or SHA-256 More info
3. Double-click the **.exe** file to install Anaconda and follow the instructions on the screen

Behind a firewall? Use these zipped Windows installers

Python 3.5 version

64-BIT INSTALLER (391M)

32-BIT INSTALLER (333M)

Python 2.7 version

64-BIT INSTALLER (381M)

32-BIT INSTALLER (324M)

THANK YOU FOR DOWNLOADING ANACONDA!

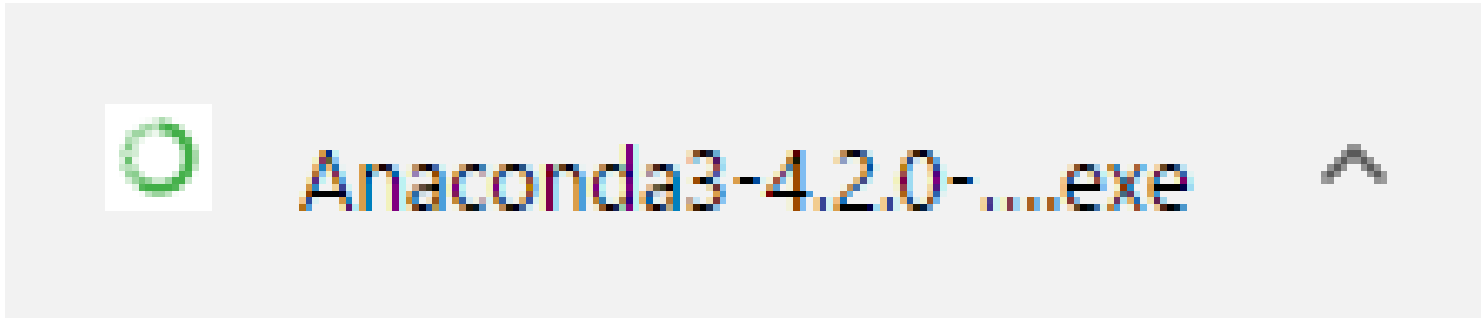
Get Started with the Anaconda Cheat Sheet

* Work Email

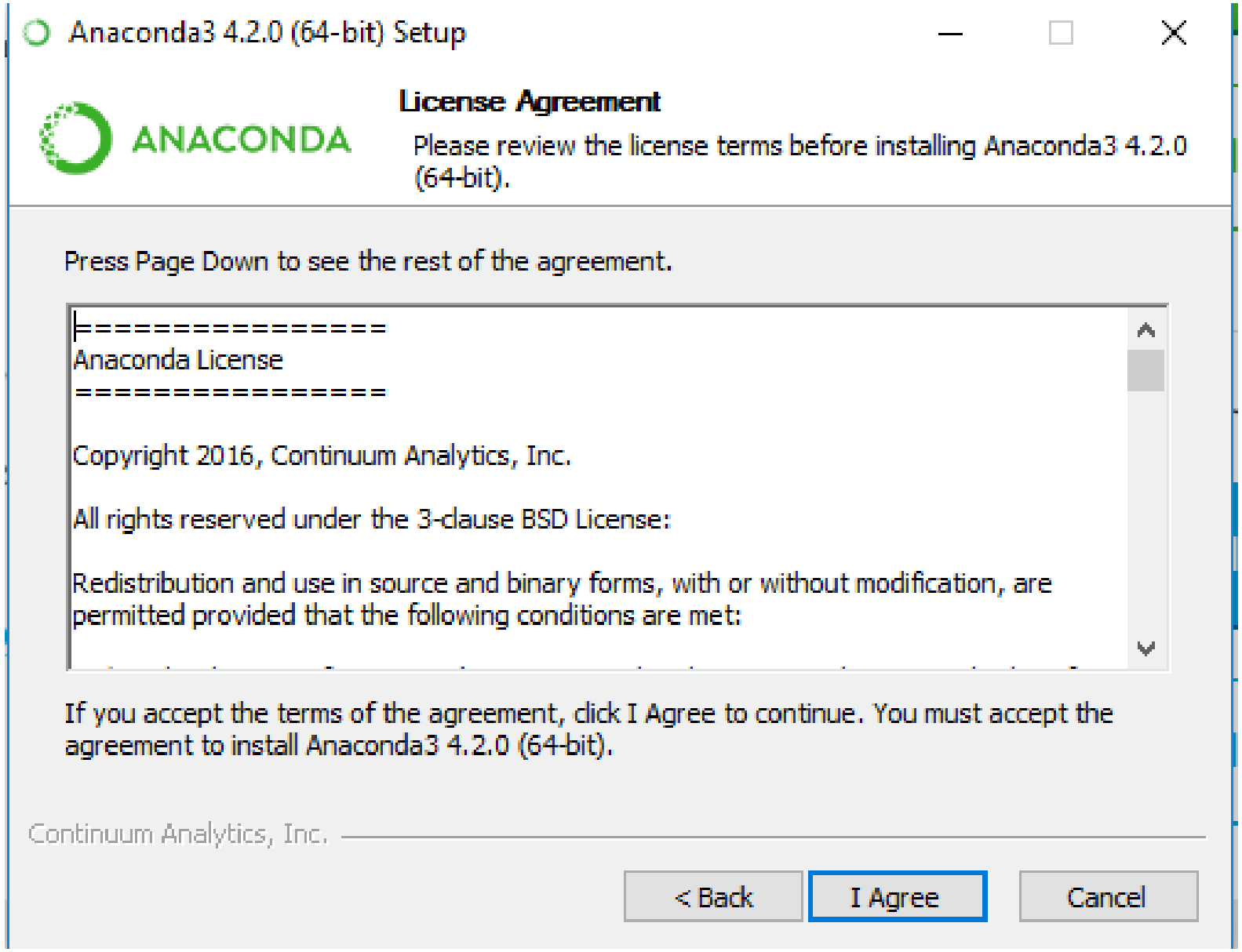
vernon.gayle@ed.ac.uk

GET THE CHEAT SHEET

NO THANKS


Anaconda3-4.2.0-....exe


Anaconda3 4.2.0 (64-bit) Setup
ANACONDA
CONTINUUM
ANALYTICS
Welcome to Anaconda3 4.2.0 (64-bit) Setup
Setup will guide you through the installation of Anaconda3 4.2.0 (64-bit).
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel


Anaconda3 4.2.0 (64-bit) Setup
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License Agreement
Please review the license terms before installing Anaconda3 4.2.0 (64-bit).
Press Page Down to see the rest of the agreement.
==========
Anaconda License
==========
Copyright 2016, Continuum Analytics, Inc.
All rights reserved under the 3-clause BSD License:
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install Anaconda3 4.2.0 (64-bit).
Continuum Analytics, Inc.
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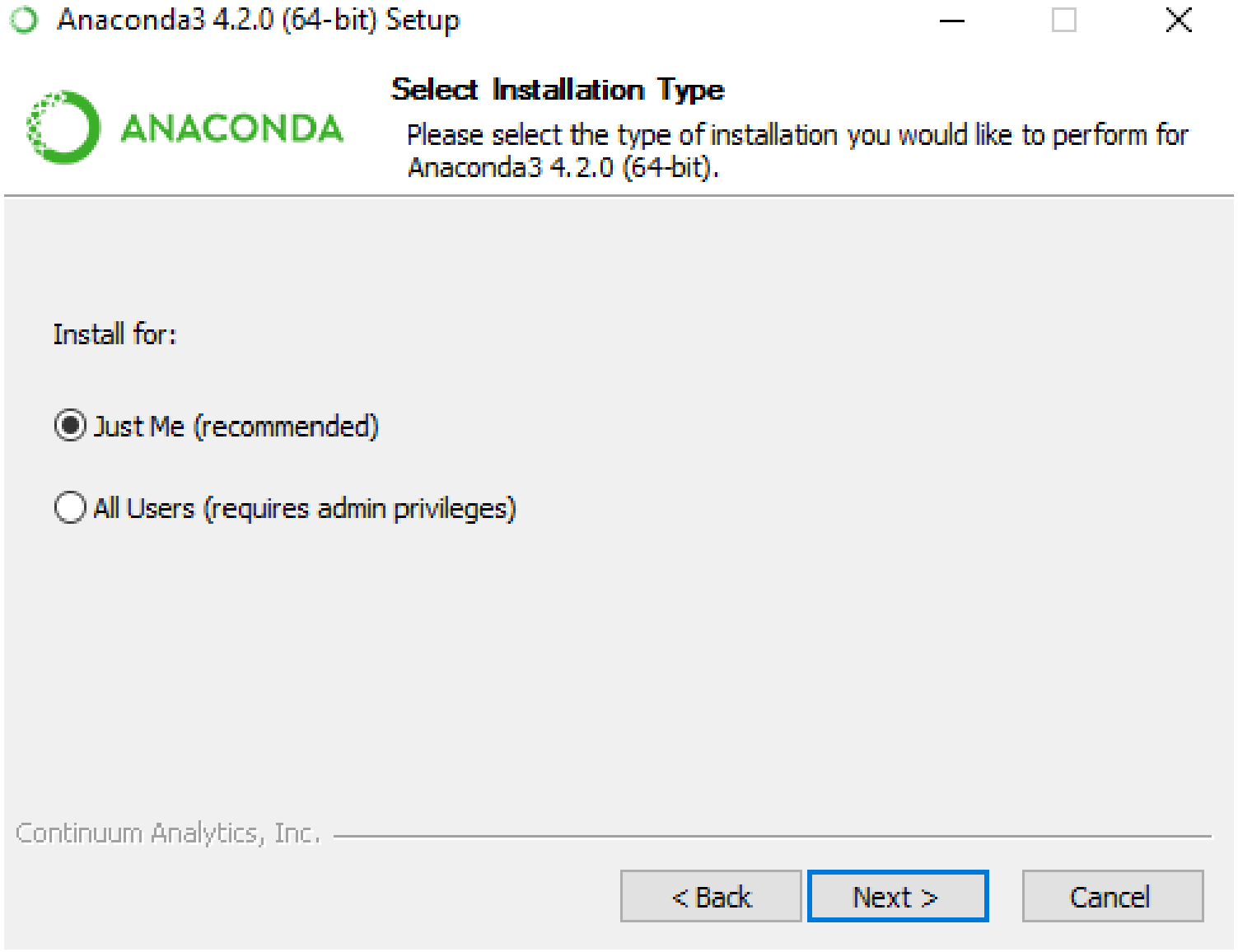
Anaconda3 4.2.0 (64-bit) Setup
ANACONDA
Select Installation Type
Please select the type of installation you would like to perform for Anaconda3 4.2.0 (64-bit).
Install for:
Just Me (recommended)
All Users (requires admin privileges)
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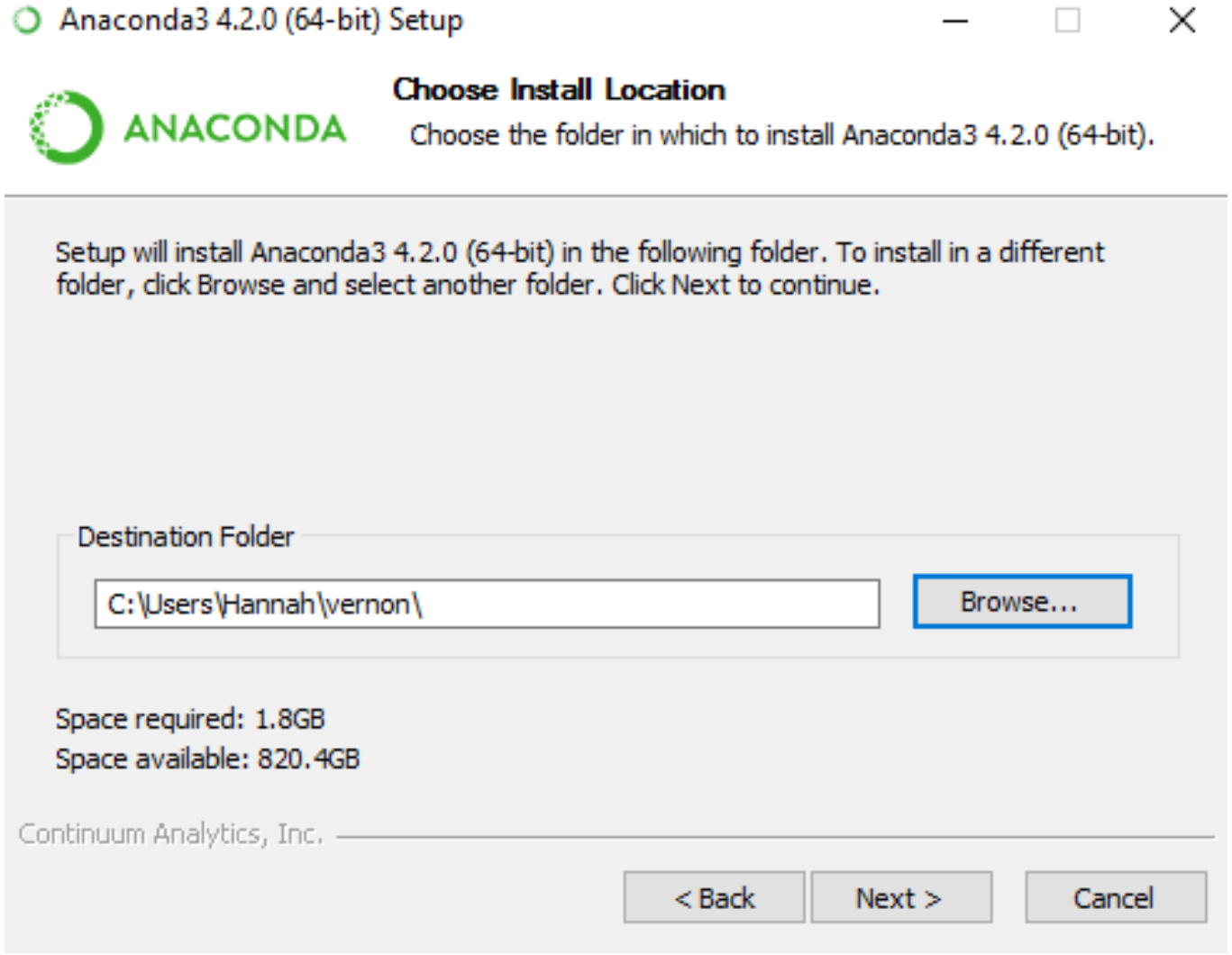
Anaconda3 4.2.0 (64-bit) Setup
ANACONDA
Choose Install Location
Choose the folder in which to install Anaconda3 4.2.0 (64-bit).
Setup will install Anaconda3 4.2.0 (64-bit) in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Users\Hannah\vernon\
Browse...
Space required: 1.8GB
Space available: 820.4GB
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Next >
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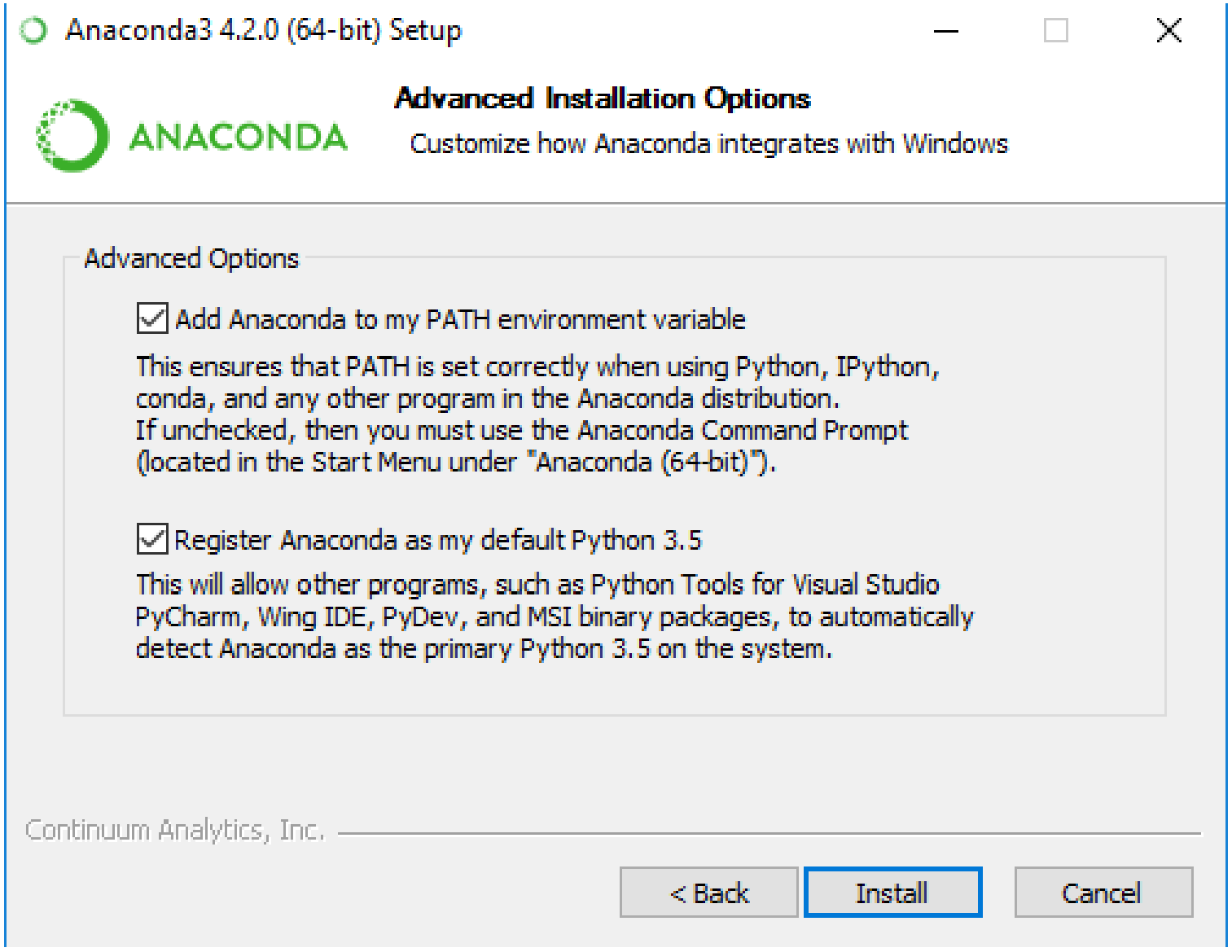
Anaconda3 4.2.0 (64-bit) Setup
ANACONDA
Advanced Installation Options
Customize how Anaconda integrates with Windows
Advanced Options
Add Anaconda to my PATH environment variable
This ensures that PATH is set correctly when using Python, IPython,
conda, and any other program in the Anaconda distribution.
If unchecked, then you must use the Anaconda Command Prompt
(located in the Start Menu under "Anaconda (64-bit)").
Register Anaconda as my default Python 3.5
This will allow other programs, such as Python Tools for Visual Studio
PyCharm, Wing IDE, PyDev, and MSI binary packages, to automatically
detect Anaconda as the primary Python 3.5 on the system.
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Install
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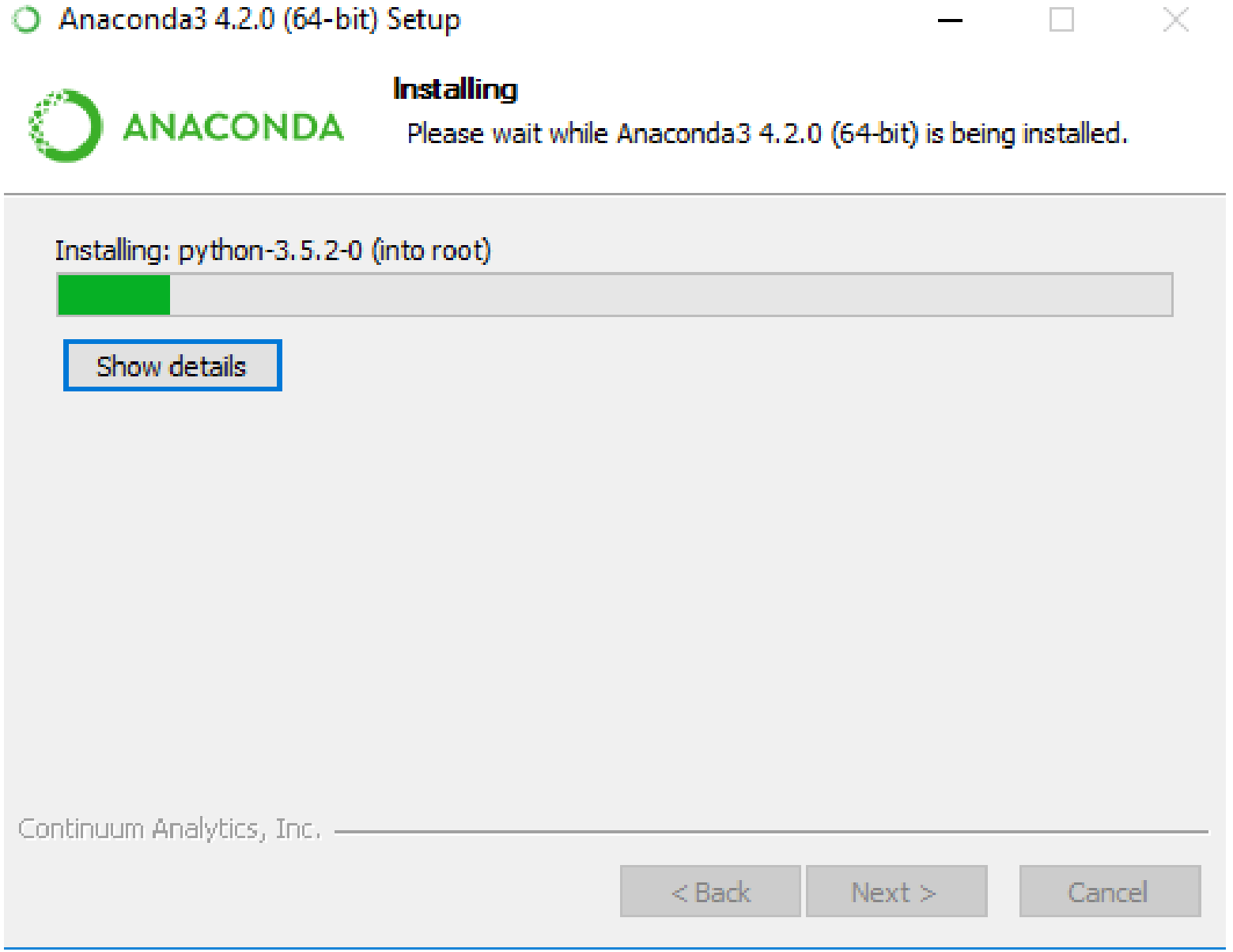
Anaconda3 4.2.0 (64-bit) Setup
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Installing
Please wait while Anaconda3 4.2.0 (64-bit) is being installed.
Installing: python-3.5.2-0 (into root)
Show details
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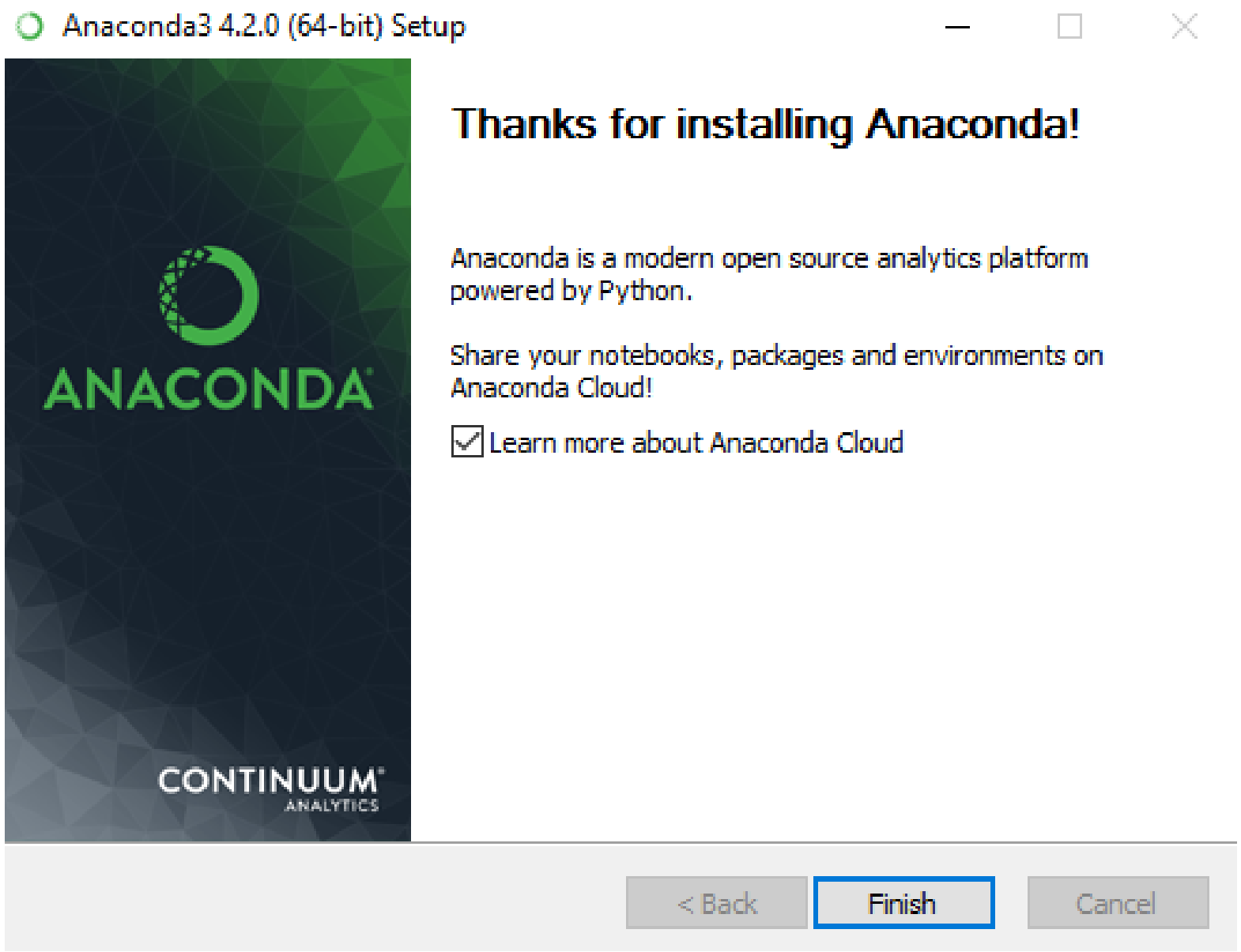
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Anaconda is a modern open source analytics platform powered by Python.
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Today, 20:00
GAYLE Vernon

Thanks for signing up for Anaconda Cloud!

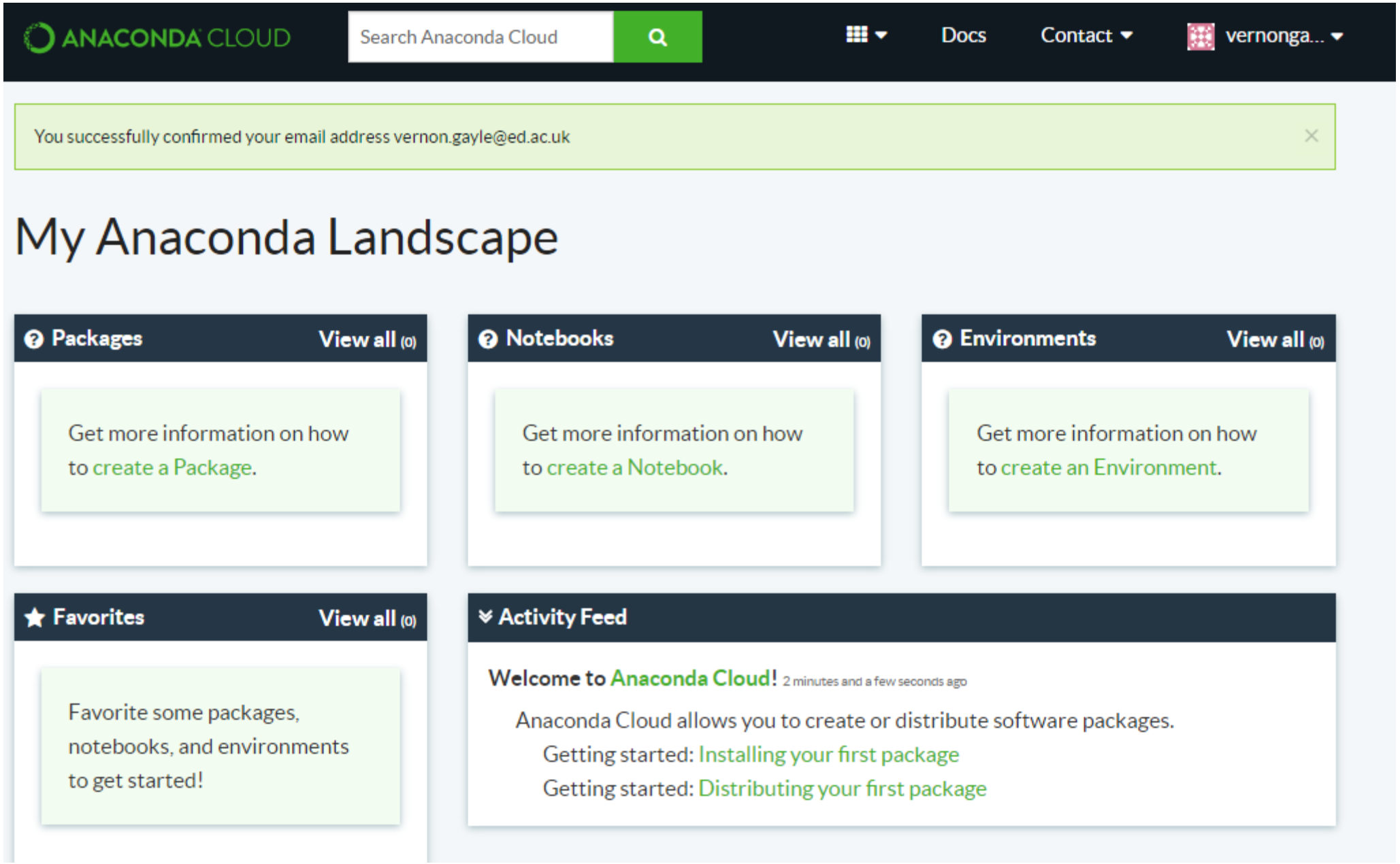
Please click the link below to confirm activation of your Anaconda Cloud account:

https://anaconda.org/account/confirm :vernon.gayle%· ed.ac.uk

Anaconda Cloud is currently an early-release service. We appreciate your feedback, questions and suggestions. As appropriate, we encourage you to use the Anaconda Cloud issue tracker or email our support team.

You may find the following resources helpful as you familiarize yourself with Anaconda Cloud:
Documentation: http://docs.anaconda.org
Issue Tracker: https://github.com/Anaconda-Server/support/issues
Email Support: support@anaconda.org

Sincerely, The Anaconda Cloud team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Get more information on how to create an Environment.
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Favorite some packages, notebooks, and environments to get started!
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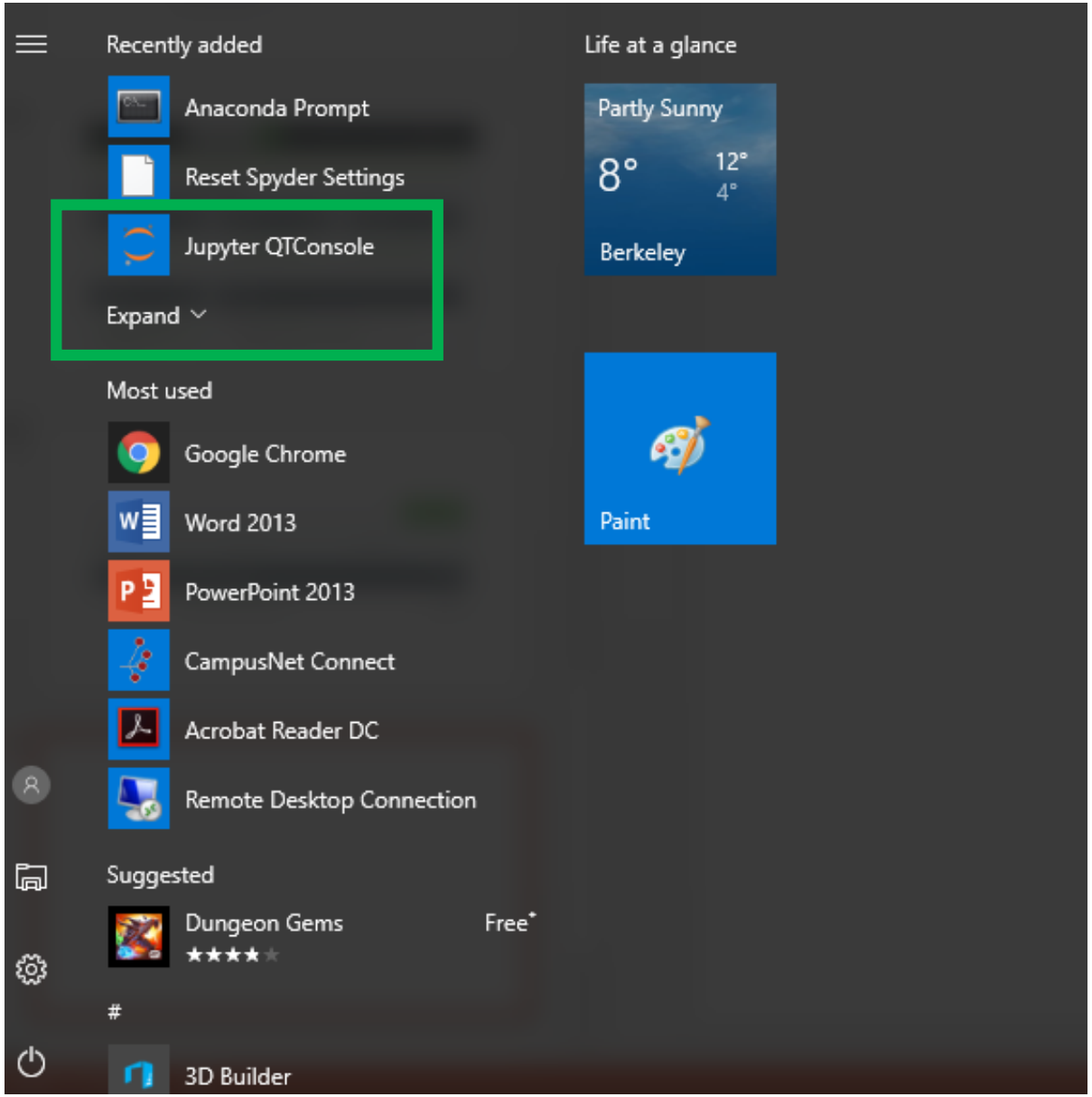
Getting started: Distributing your first package

jupyter

Filters

Type: All Access: All Platform: All

Favorites	Downloads	Package (owner / package)		Platforms
1	84522	conda-forge / **jupyter_core** 4.2.1 Core common functionality of Jupyter projects.	conda	linux-64 osx-64 win-32 win-64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Jupyter QTConsole
Expand
Most used
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Remote Desktop Connection
Suggested
Dungeon Gems
Free*
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3D Builder
Life at a glance
Partly Sunny
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12°
4°
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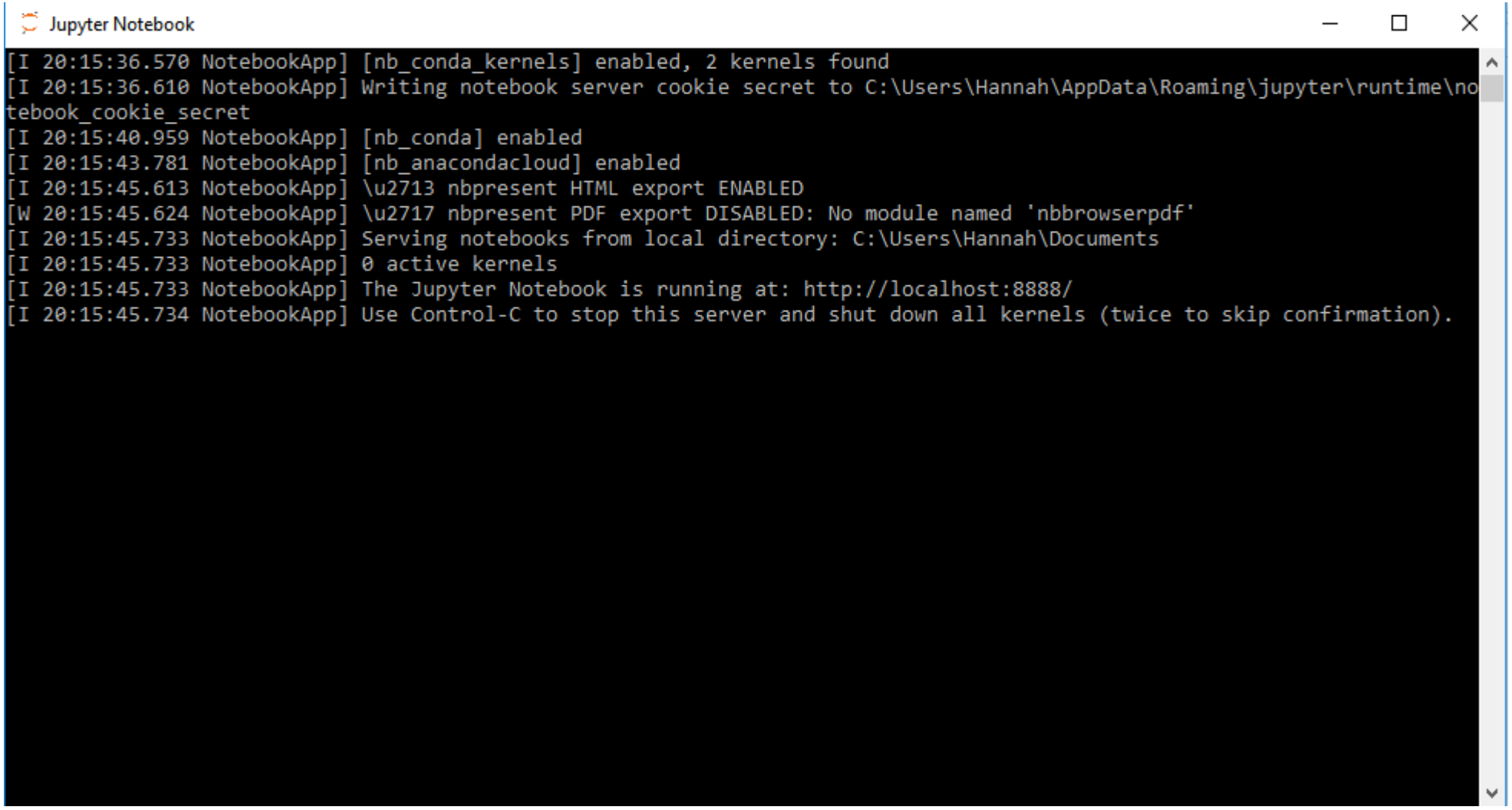
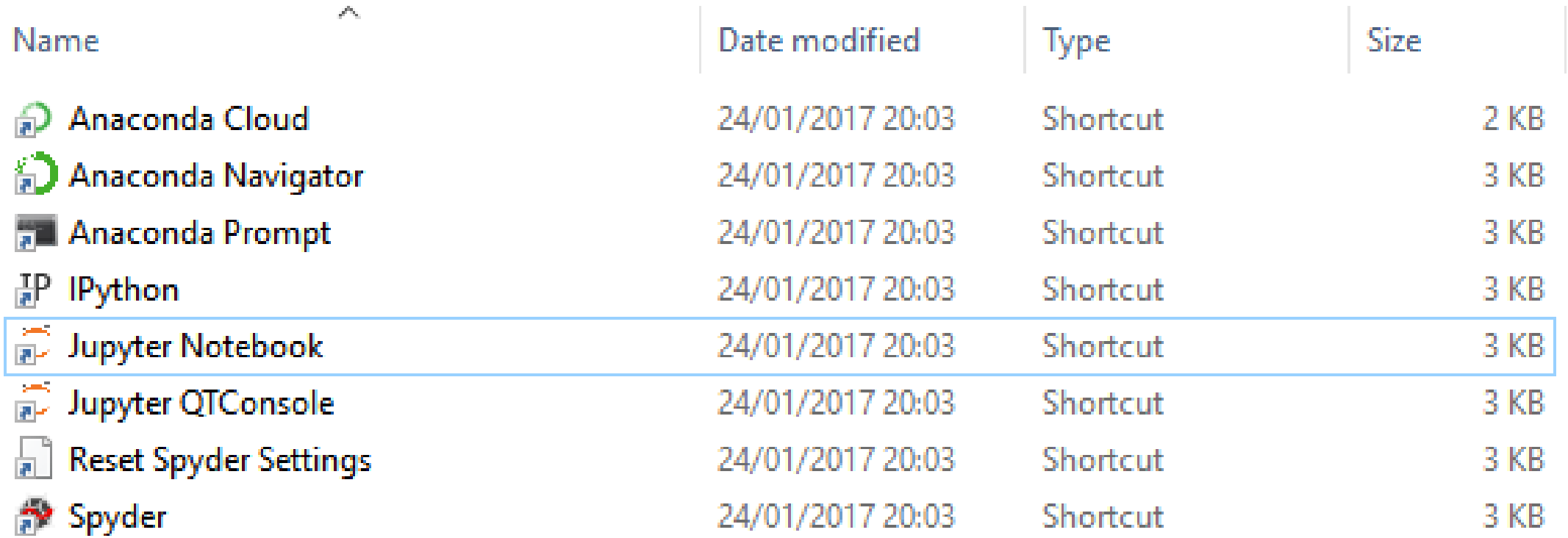
Paint


Jupyter Notebook
[I 20:15:36.570 NotebookApp] [nb_conda_kernels] enabled, 2 kernels found
[I 20:15:36.610 NotebookApp] Writing notebook server cookie secret to C:\Users\Hannah\AppData\Roaming\jupyter\runtime\no
tebook_cookie_secret
[I 20:15:40.959 NotebookApp] [nb_conda] enabled
[I 20:15:43.781 NotebookApp] [nb_anacondacloud] enabled
[I 20:15:45.613 NotebookApp] \u2713 nbpresent HTML export ENABLED
[W 20:15:45.624 NotebookApp] \u2717 nbpresent PDF export DISABLED: No module named 'nbbrowserpdf'
[I 20:15:45.733 NotebookApp] Serving notebooks from local directory: C:\Users\Hannah\Documents
[I 20:15:45.733 NotebookApp] 0 active kernels
[I 20:15:45.733 NotebookApp] The Jupyter Notebook is running at: http://localhost:8888/
[I 20:15:45.734 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).

Launching the Jupyter Notebook



Name	Date modified	Type	Size
Anaconda Cloud	24/01/2017 20:03	Shortcut	2 KB
Anaconda Navigator	24/01/2017 20:03	Shortcut	3 KB
Anaconda Prompt	24/01/2017 20:03	Shortcut	3 KB
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Jupyter Notebook	24/01/2017 20:03	Shortcut	3 KB
Jupyter QTConsole	24/01/2017 20:03	Shortcut	3 KB
Reset Spyder Settings	24/01/2017 20:03	Shortcut	3 KB
Spyder	24/01/2017 20:03	Shortcut	3 KB

localhost:8888/tree

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jupyter

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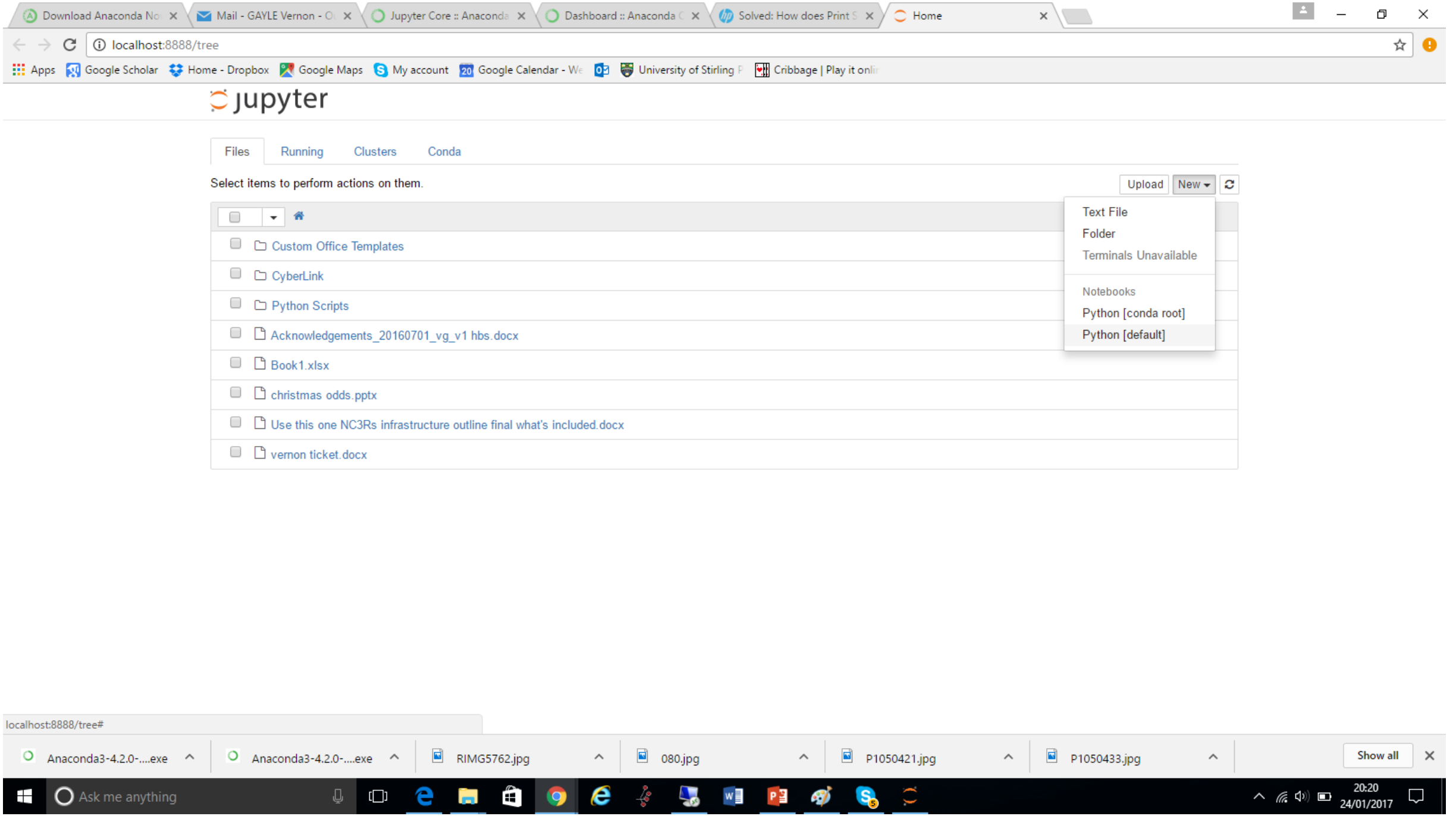
- Book1.xlsx
- christmas odds.pptx
- Use this one NC3Rs infrastructure outline final what's included.docx
- vernon ticket.docx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Jupyter Core :: Anaconda
Dashboard :: Anaconda C
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Home
localhost:8888/tree
Apps
Google Scholar
Home - Dropbox
Google Maps
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Files
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Conda
Select items to perform actions on them.
Upload
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Text File
Folder
Terminals Unavailable
Notebooks
Python [conda root]
Python [default]
Custom Office Templates
CyberLink
Python Scripts
Acknowledgements_20160701_vg_v1 hbs.docx
Book1.xlsx
christmas odds.pptx
Use this one NC3Rs infrastructure outline final what's included.docx
vernon ticket.docx
localhost:8888/tree#
Anaconda3-4.2.0-....exe
Anaconda3-4.2.0-....exe
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P1050421.jpg
P1050433.jpg
Show all
Ask me anything
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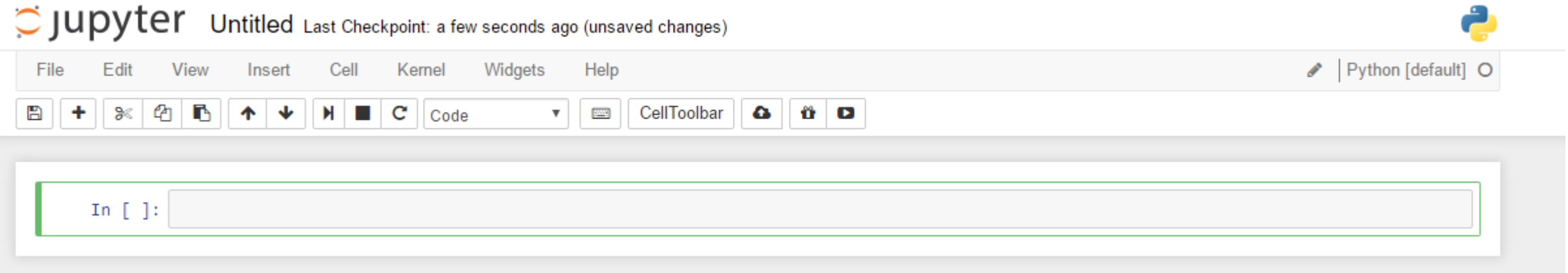
24/01/2017


jupyter
Untitled
Last Checkpoint: a few seconds ago (unsaved changes)
File
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View
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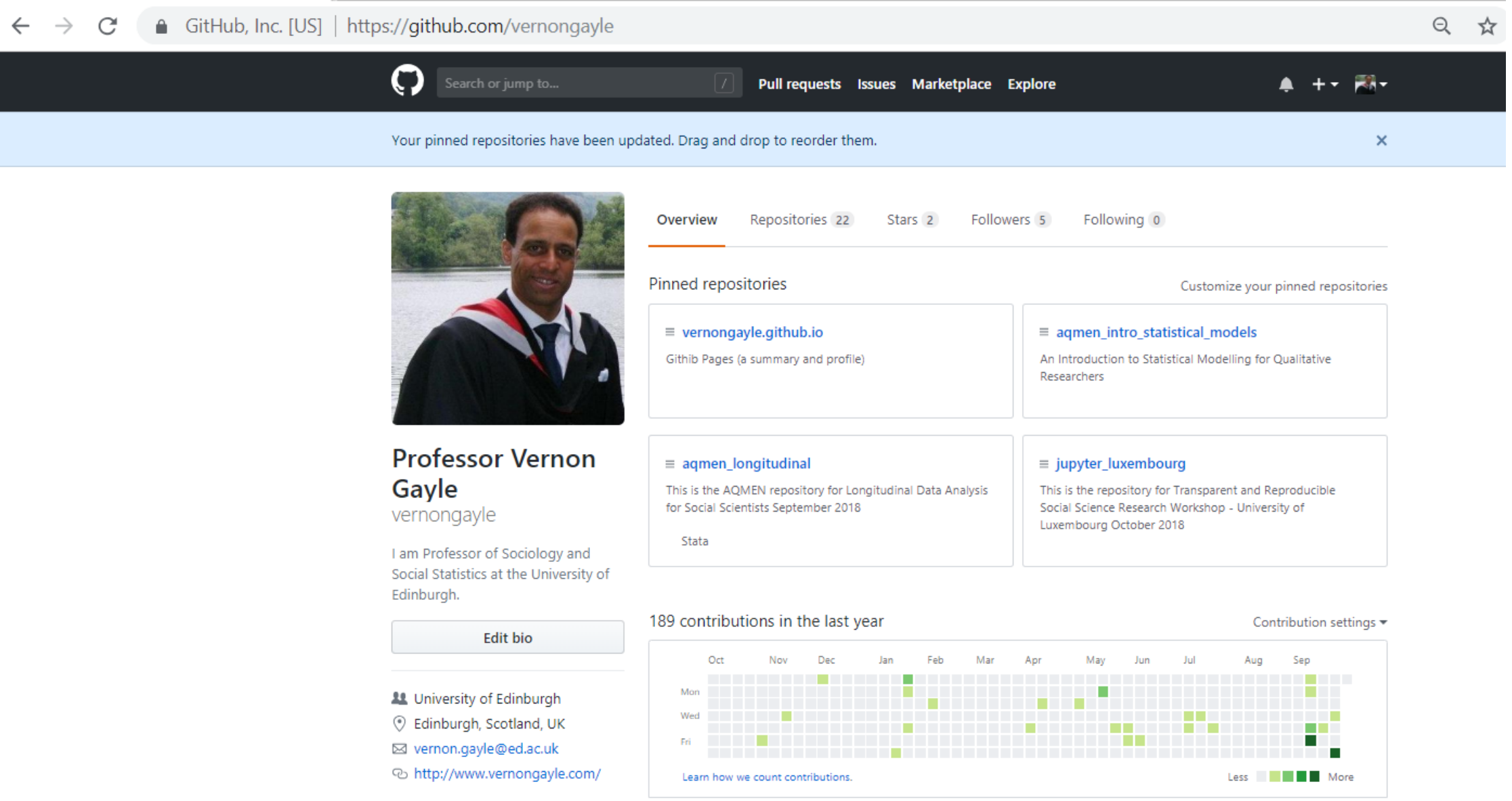
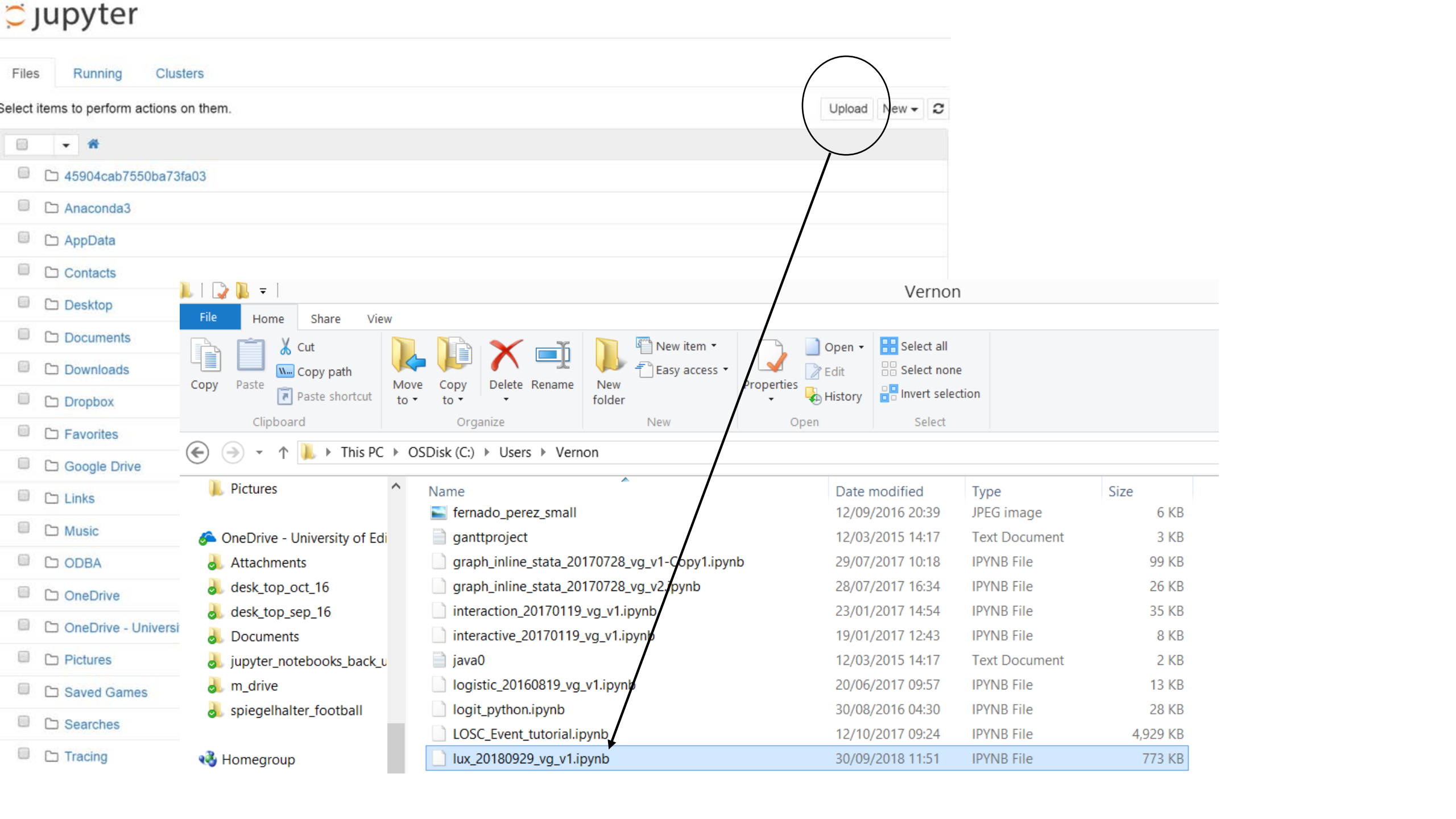
Cell
Kernel
Widgets
Help
Python [default]
Code
CellToolbar
In [ ]:



https://github.com/vernongayle/jupyter_luxembourg


jupyter
Files
Running
Clusters
Select items to perform actions on them.
Upload
New
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Anaconda3
AppData
Contacts
Desktop
Documents
Downloads
Dropbox
Favorites
Google Drive
Links
Music
ODBA
OneDrive
OneDrive - Universi
Pictures
Saved Games
Searches
Tracing
Vernon
File
Home
Share
View
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organize
New folder
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Properties
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Size
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IPYNB File
4,929 KB
lux_20180929_vg_v1.ipynb
30/09/2018 11:51
IPYNB File
773 KB

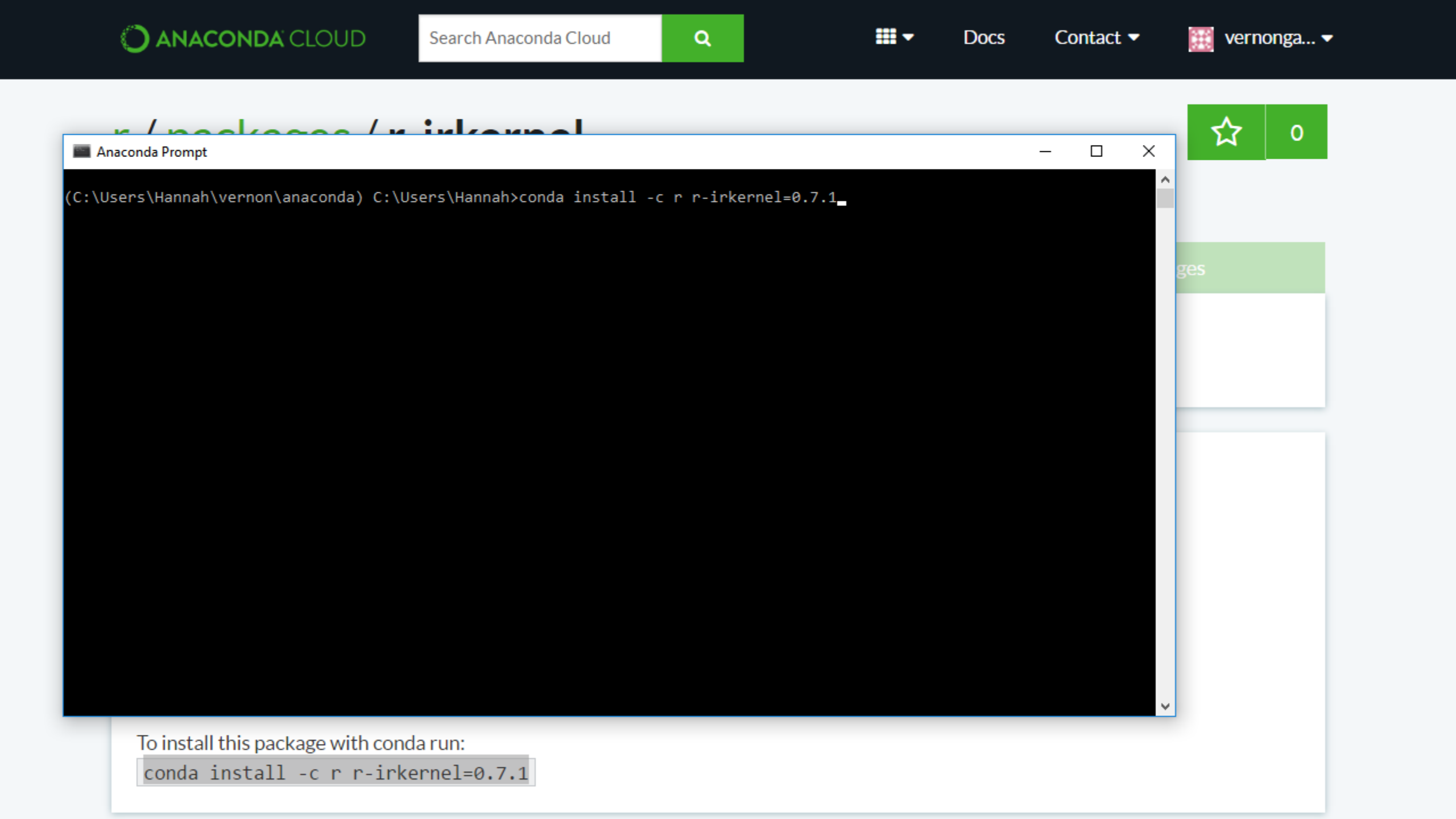
Installing the R Kernel

1. At the conda prompt type *conda install -c r r-irkernel=0.7.1*

   See https://anaconda.org/r/r-irkernel

2. Alternatively, try *conda install -c r r-essentials=1.5.1*

   See https://anaconda.org/r/r-essentials


ANACONDA CLOUD
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Docs
Contact
vernonga...
0
Anaconda Prompt
(C:\Users\Hannah\vernon\anaconda) C:\Users\Hannah>conda install -c r r-irkernel=0.7.1
To install this package with conda run:
conda install -c r r-irkernel=0.7.1

YOU MIGHT NEED TO RESTART JUPYTER!

Installing the R Kernel Another Approach

In R run the following code…

```
install.packages(c('repr', 'IRdisplay','evaluate','crayon','pbdZMQ','devtools',
'uuid','digest')) devtools::install_github('IRkernel/IRkernel')

IRkernel::installspec(user = FALSE)
```

YOU MIGHT NEED TO RESTART JUPYTER!

jupyter qstep_20170122_vq_v1 Last Checkpoint: 10 minutes ago (autosaved)

File Edit View Insert Cell Kernel Widgets Help | Python [default]

CellToolbar

Kernel menu:
- Interrupt
- Restart
- Restart & Clear Output
- Restart & Run All
- Reconnect
- Change kernel ▸
  - Python [conda root]
  - Python [default]
  - R
- Conda Packages
- Visit anaconda.org

R Analysis

WARNING *Switch Kernel*

getting the libraries for R

In [1]:
```
library(foreign)
library(survey)
```

```
Loading required package: grid

Attaching package: 'survey'

The following object is masked from 'package:graphics':

    dotchart
```

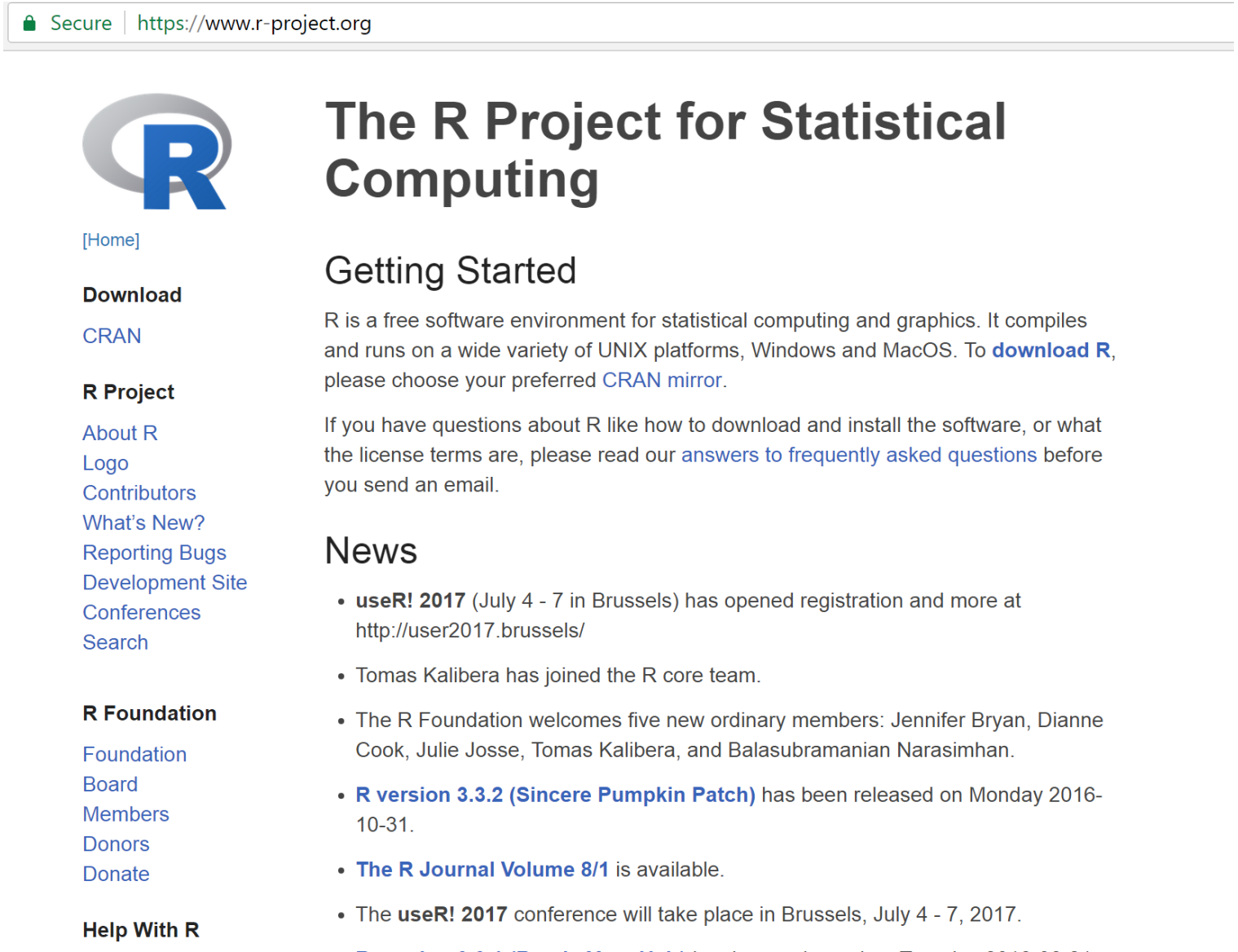
If you have an error message here it is possibly because you have not switched to the *R Kernel*

getting the Stata data file (.dta) into an object called "mydata" then summarizing the dataset

In [2]:
```
mydata <- read.dta("http://www.vernongayle.com/uploads/2/2/3/0/22304498/wemp.dta")
summary(mydata)
```

Out[2]:
```
      case            femp            mune            time      
 Min.   :   1.0   Min.   :0.0000   Min.   :0.00000   Min.   : 0.0  
 1st Qu.: 274.0   1st Qu.:0.0000   1st Qu.:0.00000   1st Qu.: 4.0  
 Median : 538.0   Median :1.0000   Median :0.00000   Median : 8.0  
 Mean   : 517.7   Mean   :0.6456   Mean   :0.07405   Mean   : 7.2  
```

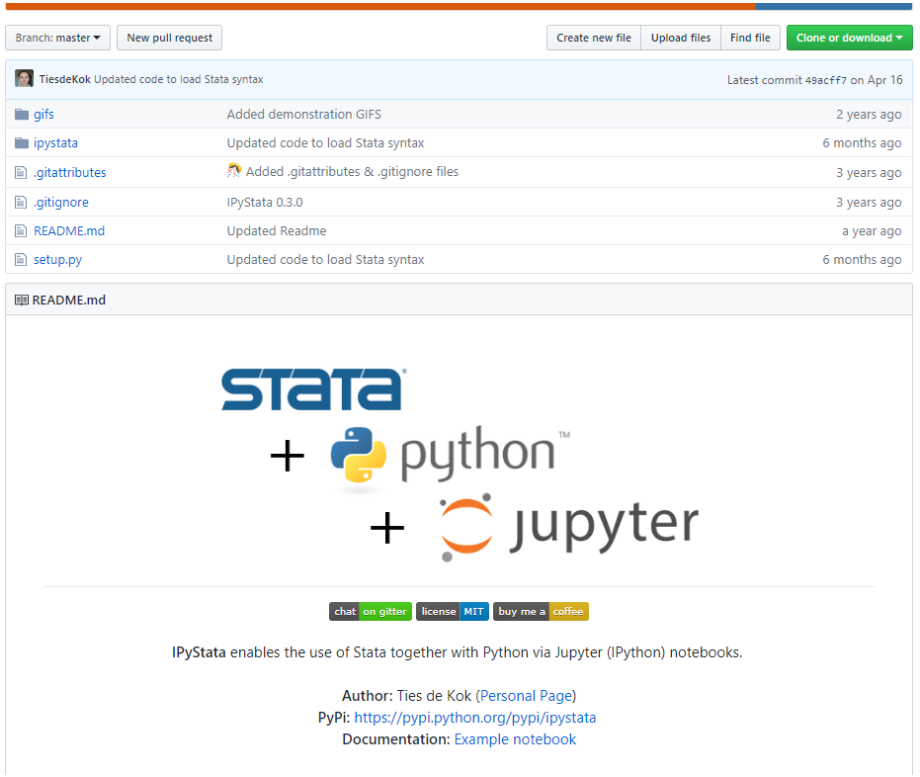
You may need to install R first…..



You MUST have Stata to run Stata!!!!

You MUST have Stata to run Stata!!!!

https://github.com/TiesdeKok/ipystata



Branch: master ▾ | New pull request | Create new file | Upload files | Find file | Clone or download ▾

TiesdeKok Updated code to load Stata syntax — Latest commit 49acff7 on Apr 16

gifs	Added demonstration GIFS	2 years ago
ipystata	Updated code to load Stata syntax	6 months ago
.gitattributes	Added .gitattributes & .gitignore files	3 years ago
.gitignore	IPyStata 0.3.0	3 years ago
README.md	Updated Readme	a year ago
setup.py	Updated code to load Stata syntax	6 months ago

README.md

Stata + python + jupyter

chat on gitter | license MIT | buy me a coffee

IPyStata enables the use of Stata together with Python via Jupyter (IPython) notebooks.

Author: Ties de Kok (Personal Page)
PyPi: https://pypi.python.org/pypi/ipystata
Documentation: Example notebook

Using Stata via Magic Cells

```
In [8]: %%stata -o wemp_df
        logit femp mune und5
```

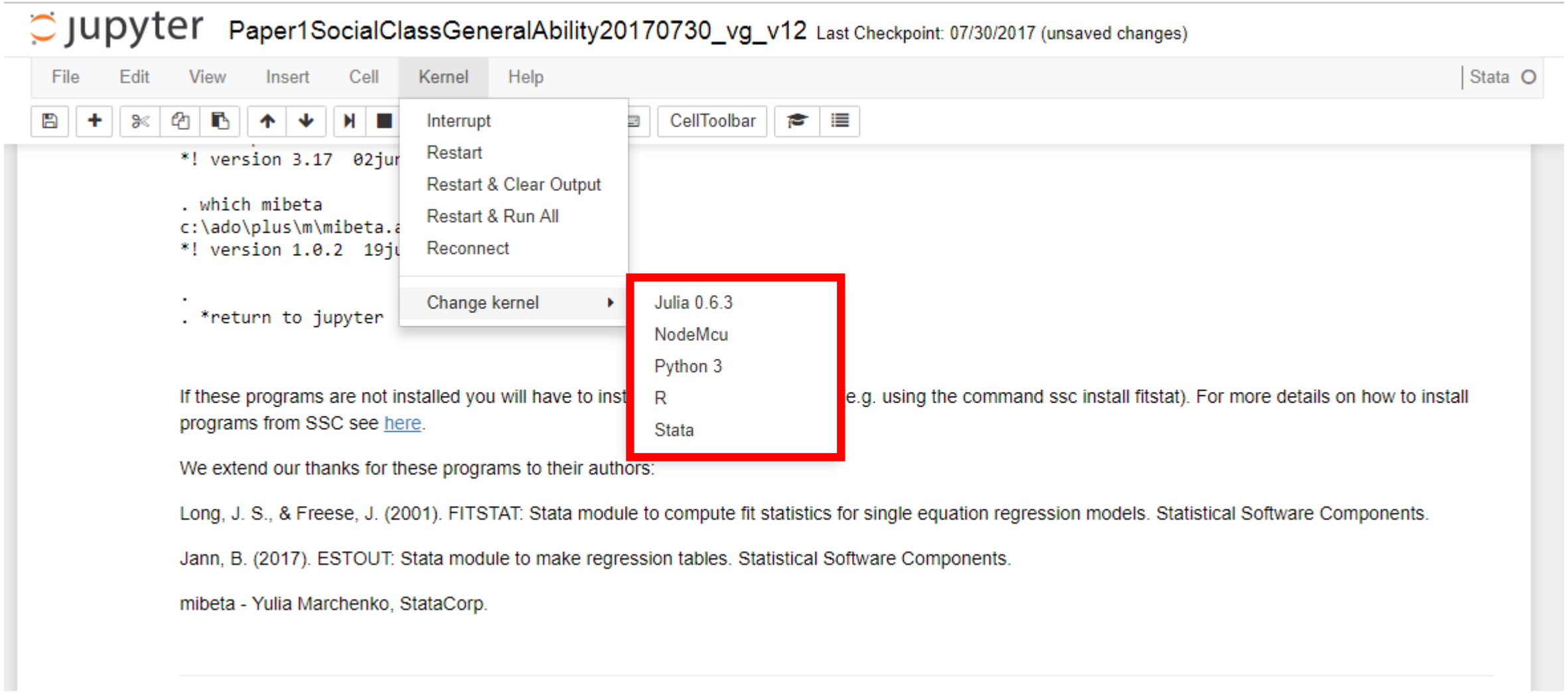
```
Iteration 0:   log likelihood = -1027.2309
Iteration 1:   log likelihood = -879.88806
Iteration 2:   log likelihood = -878.68101
Iteration 3:   log likelihood = -878.67998
Iteration 4:   log likelihood = -878.67998

Logistic regression                             Number of obs     =      1,580
                                                LR chi2(2)        =     297.10
                                                Prob > chi2       =     0.0000
Log likelihood = -878.67998                     Pseudo R2         =     0.1446

------------------------------------------------------------------------------
        femp |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        mune |  -1.703308   .2358489    -7.22   0.000    -2.165563   -1.241053
        und5 |  -1.733521   .1221909   -14.19   0.000    -1.973011   -1.494031
       _cons |   1.306829   .0744154    17.56   0.000     1.160978    1.452681
------------------------------------------------------------------------------
```

Using Stata via a Kernel

https://github.com/jrfiedler/stata-kernel



3. Create a Microsoft Windows application to interact with Stata via Automation

3.1 Install Stata Automation object

To use a Stata Automation object, the type library has to be registered after Stata is installed on a Microsoft Windows machine.

To register the Stata Automation type library on a Windows non-Vista machine, do the following steps:

1. From the Start menu, select **Run**, enter **cmd**, and click **OK**.
2. Change the directory to the directory with the Stata executable.
3. Type **StataSE /Register** or **StataSE /Regserver**.

To register the Stata Automation type library on Windows Vista, do the following steps:

1. In the installation directory, right-click on the Stata executable, for example, StataSE.exe. Choose "**Create Shortcut**".
2. Right-click on the newly created "**Shortcut to StataSE.exe**", choose "**Property**", and change the **Target** from "**C:\Program Files\Stata13\StataSE.exe**" to "**C:\Program Files\Stata13\StataSE.exe" /Register**. Click "**OK**".
3. Right-click on the updated "**Shortcut to StataSE.exe**"; choose "**Run as administrator**".

The following steps will unregister the Stata Automation type library:

1. From the Start menu, select **Run**, enter **cmd**, and click **OK**.
2. Change the directory to the directory with the Stata executable.
3. Type **StataSE /Unregister** or **StataSE /Unregserver**.

To manually register the type library, do the following steps:

1. From the Start menu, select **Run**, enter **cmd**, and click **OK**.
2. Change the directory to the directory with the Stata executable.
3. Type **StataSE /Register** or **StataSE /Regserver**.

Jupyter Notebooks

University of Luxembourg
October 2018

Vernon Gayle
University of Edinburgh

Roxanne Connelly
University of York

RUSSELL GROUP

THE UNIVERSITY OF EDINBURGH

UNIVERSITY of York