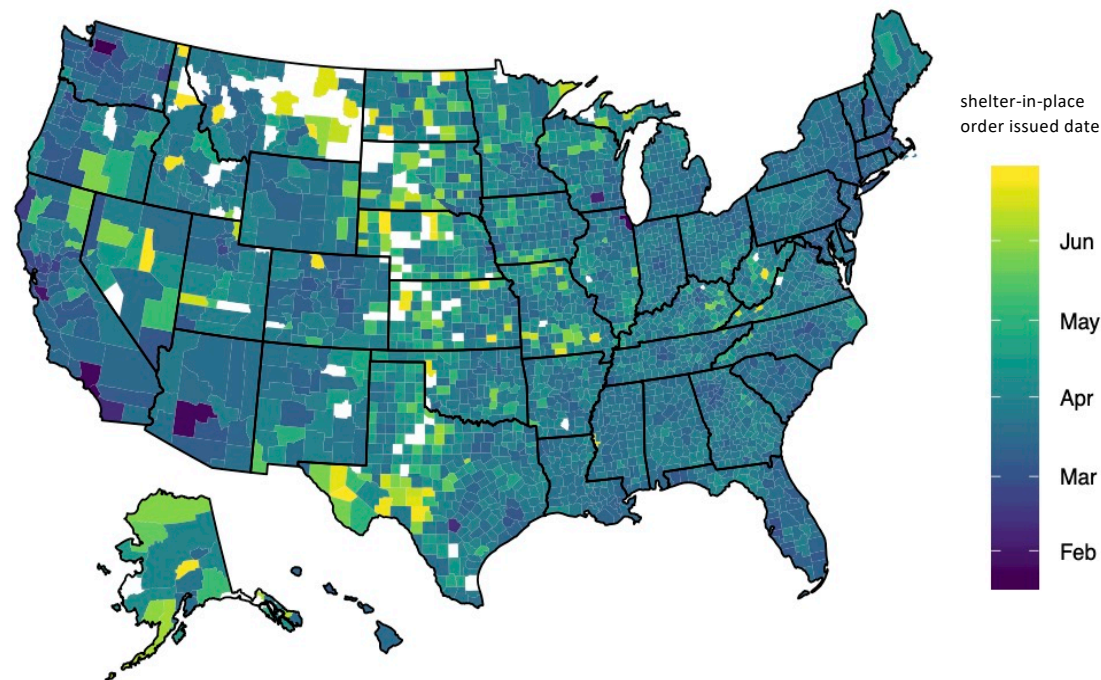


S&DS 177

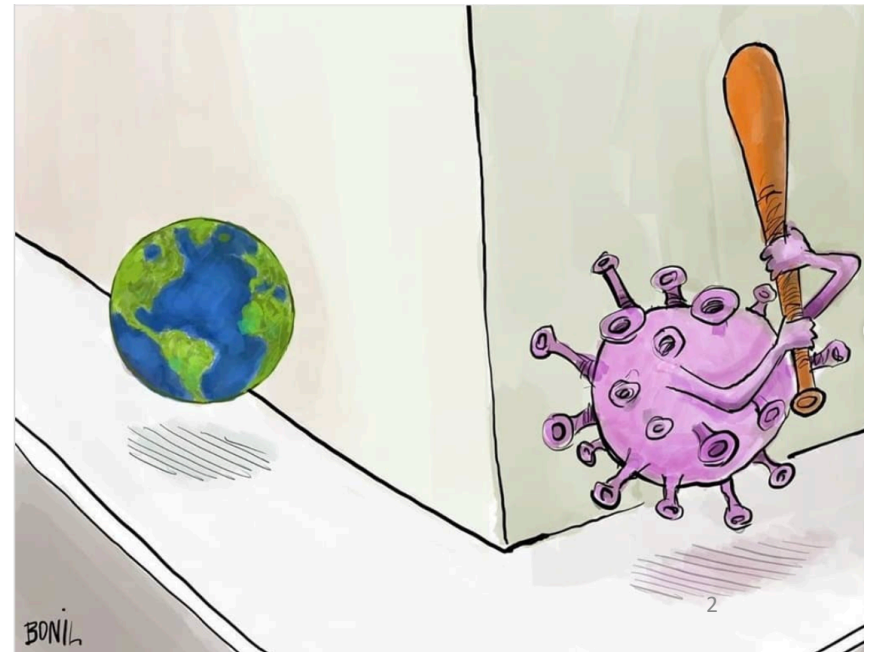
YData: COVID-19 Behavioral Impacts



Youpei Yan
youpei.yan@yale.edu

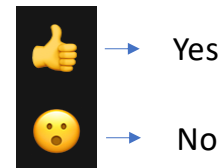
Overview:

- Introduction of the course website
- Course overview & Discussion of the impact of pandemic
- Jupyter Notebook (Lab 0 discussion)



Overview:

- Introduction of the course website
 - Canvas – **After class:** I will upload/update the lecture notes and the corresponding lab.
 - Backup: https://github.com/youpeiyan/YData_SDS177
 - Zoom WEEKLY Meeting: Canvas Calendar
 - Use earbuds or headphones to avoid feedback and echoes.
 - Please turn on your video to better participate in class.
 - And respond the Yes/No questions with Reactions if you are shy
- Discussion: Piazza





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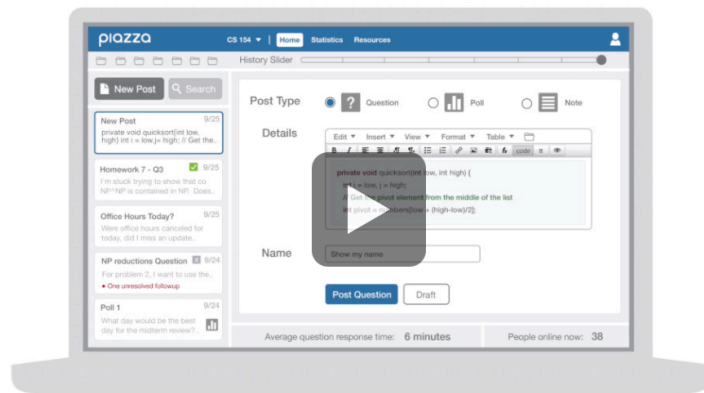


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- Wiki style format enables collaboration in a single space
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Post Type

- ☐ Question
If you need an answer
- ☒ Note
If you don't need an answer
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If you need a vote

Post to

- ☒ Entire Class
- ☐ Individual Student(s) / Instructor(s)

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Summary
(100 characters or less)

Enter a one line summary...

Details

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- ☐ Markdown editor

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Posting Options

- ☐ Make this an announcement (note appears on the course page)
- ☐ Send email notifications immediately (bypassing students' email preferences, if necessary)
- ☐ Add this post to students' reading lists (appears in student's "my reading list" bin until they've read it; see details in Manage Class)

Average Response Time:	Special Mentions:	Online Now	This Week:
N/A	There are no special mentions at this time.	1	1

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Lecture 1 (Feb 4, Thursday 9:25 – 11:15)

Overview:

- Introduction of the course website
- Course overview & Discussion of the impact of pandemic

Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 1. Introduction of the course website

I will post all of our course notes (lecture/lab notes) and homework assignments on this website:

https://github.com/youpeiyan/YData_SDS177

- Homework & Solution (post after due)
- In-class practice (Jupyter Notebook)
- Slides (like this one)

youpeiyan / YData_SDS177

<> Code Issues Pull requests Actions Projects Wiki Security Insights

main 1 branch 0 tags Go to file Add file

youpeiyan Add files via upload fb1a307 now

Homework	Add files via upload
Lab	Add files via upload
Lecture	Add files via upload
README.md	Update README.md

README.md

YData_SDS177/577

Welcome to this connector course! This is where you can find all our course notes for Spring 2021 SDS (YData: COVID-19 Behavioral Impacts).

The datasets (given the limited size of files in GitHub) can be accessed through the following Google Drive link: <https://drive.google.com/drive/folders/1SLPLMpgdzc79iMBOYhh9CmOZaw7odpE>

The datasets are for teaching purpose only. Please do not share the datasets with others unless you receive permission.

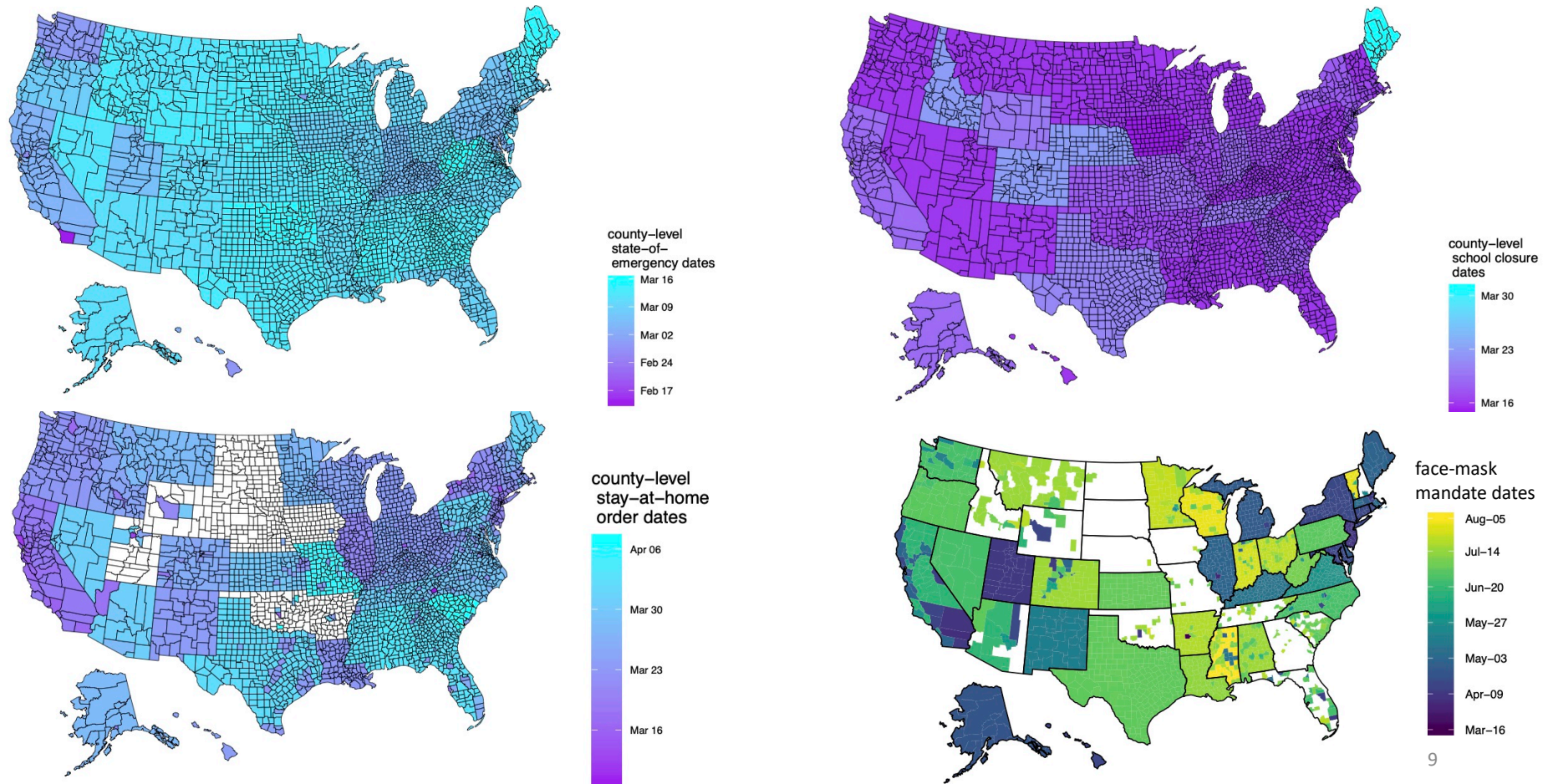
- Datasets for this course

Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 2. Course overview & Discussion of the impact of pandemic

- List non-pharmaceutical orders that you have heard when the COVID-19 pandemic started.

Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 2. Course overview & Discussion of the impact of pandemic

- List non-pharmaceutical orders that you have heard when the COVID-19 pandemic started.

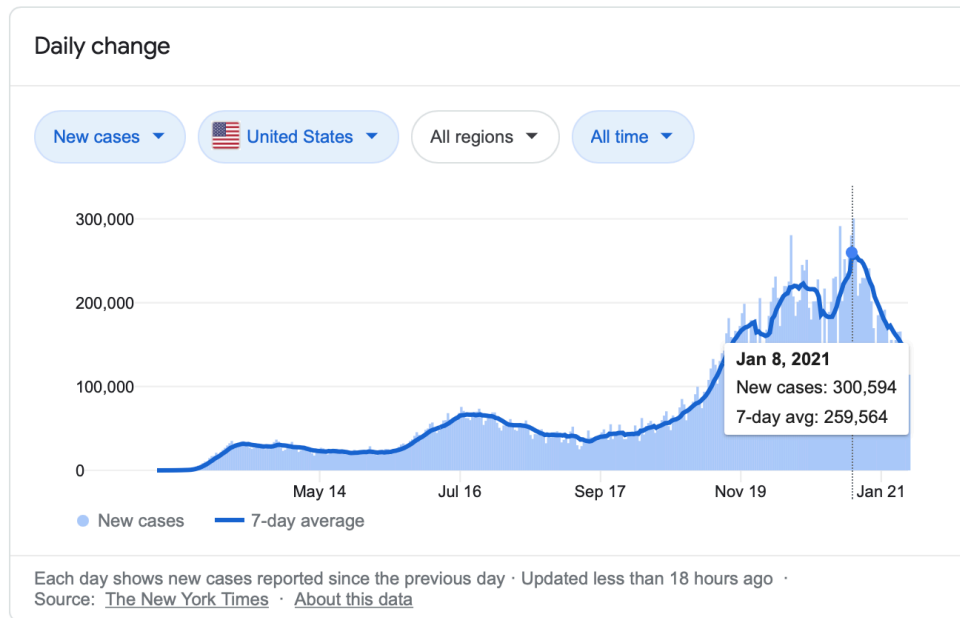


Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 2. Course overview & Discussion of the impact of pandemic

- List non-pharmaceutical policies that you have heard when the COVID-19 pandemic started.
- What about the trend of cases and deaths?

Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 2. Course overview & Discussion of the impact of pandemic

- List non-pharmaceutical policies that you have heard when the COVID-19 pandemic started.
- What about the trend of cases and deaths?



- Are some of those made voluntarily?
- Or due to the policies we discussed?

- Any reaction or response did you, your family, your friends, your neighbors take?
- And when?

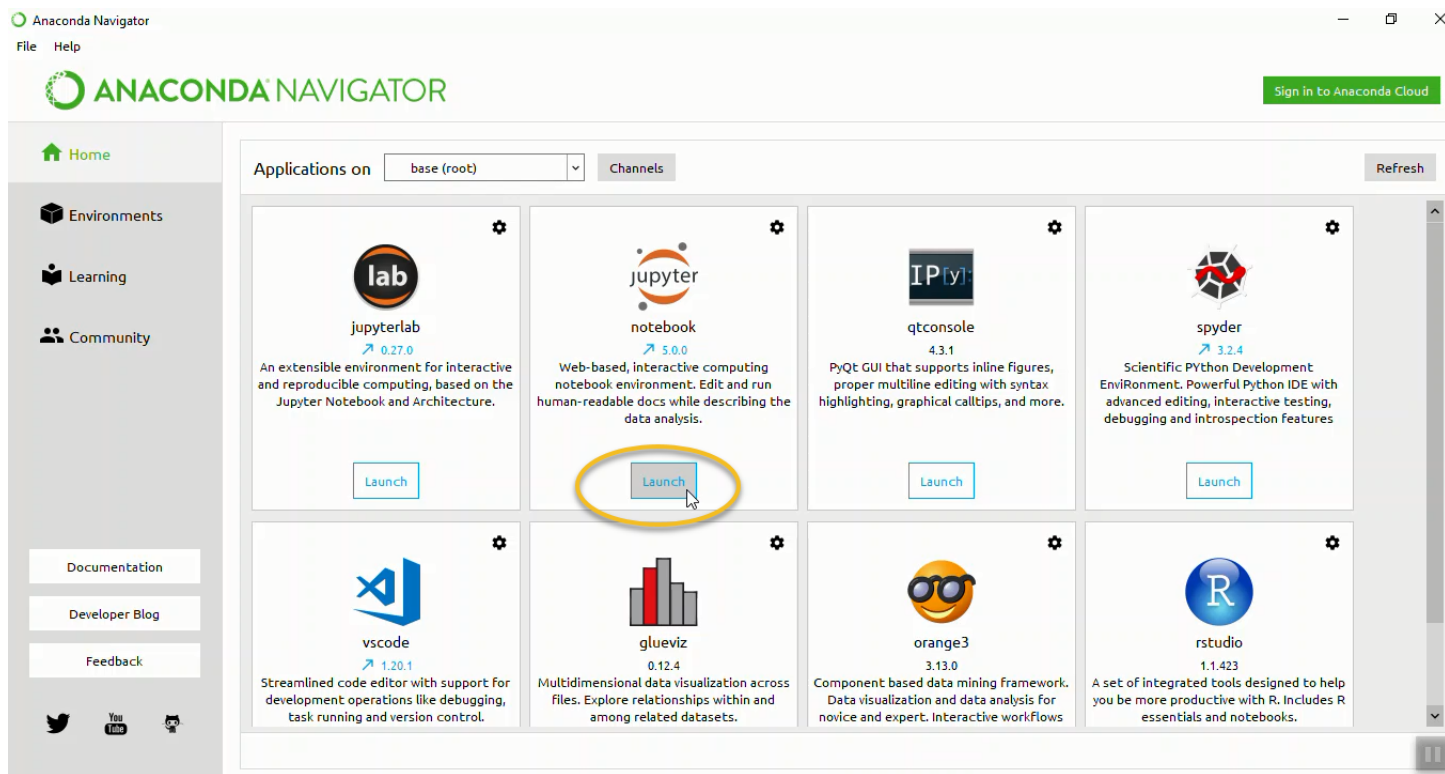


What is this course all about?

- This is a connector course to the main data science course SDS123.
- Also an introduction to data science that emphasizes computational and programming.
- Focus on a special topic on COVID-19's Behavioral Impacts.
 - People alter behavior in response to infectious disease risk.
 - The COVID-19 epidemic last year was the first modern epidemic in the US, where most people were ordered by governments to reduce time in public.
 - With Python, we investigate how non-pharmaceutical interventions interact with voluntary or mandated **behavioral shifts** during epidemics.
 - Increased time at home?
 - Reduced trips to malls and parks?

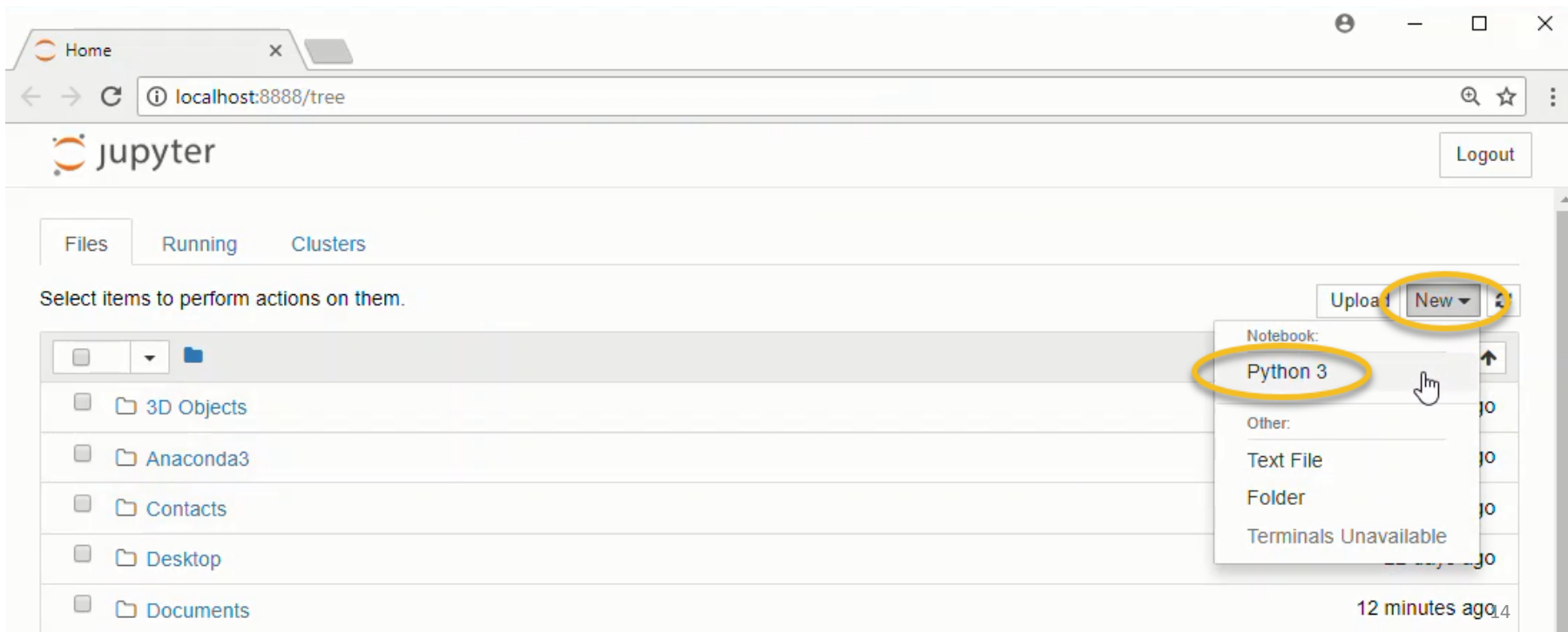
Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 3. Jupyter Notebook

- If you haven't done so, please download Anaconda at the following link: [Anaconda.com/distribution](https://anaconda.com/distribution)
- Then, Launch Jupyter Notebook by clicking Launch



Lecture 1 (Feb 4, Thursday 9:25 – 11:15) 3. Jupyter Notebook

- If you haven't done so, please download Anaconda at the following link: [Anaconda.com/distribution](https://anaconda.com/distribution)
- Then, Launch Jupyter Notebook by clicking Launch
- You can create a new Python3, or choose one downloaded in your folder.
- A new notebook will open as a new tab in your web browser.
- Now, let's open Lab0 named **YData177_Lab0.ipynb** in our course folder.



Index of YData177_Lab0.ipynb

1. Jupyter Notebook

- 1.1 Text Cells
- 1.2 Code Cells
- 1.3 Writing Jupyter Notebook
- 1.4 Errors
- 1.5 The Kernel

2. Import a Local Dataset

- 2.1 Loading data tables
- 2.2 Selecting a subset of columns from a table
- 2.3 Selecting a subset of rows from a table
- 2.4 Using methods on values in a column of data in a table
- 2.5 Sorting values in a column of data in a table

3. Import an Online Dataset: COVID-19 CASE/DEATH REPORTS in New York Times

```
Table.read_table('url')  
my_table.num_columns  
my_table.num_rows
```

```
my_table.select('col_name_1', 'col_name_2', 'col_name3')  
my_table.select(0,1,5)
```

```
my_table.take(2,5,6)
```

```
my_selected_column.sum()  
my_selected_column.mean()  
my_selected_column.max()
```

```
my_table.sort('col_name')
```

```
read_url('online_url')  
pd.read_csv('online_url',sep=",")
```

Finally:

Way to save the file in both .pdf and .ipynb format (so any changes we made here can be saved and printed)

To produce the .pdf, please do the following in order to preserve the cell structure of the notebook:

1. Go to "File" at the top-left of your Jupyter Notebook
2. Under "Download as", select "HTML (.html)"
3. After the .html has downloaded, open it and then select "File" and "Print" (note you will not actually be printing)
4. From the print window, select the option to save as a .pdf

To produce the .ipynb, please do the following:

1. Go to "File" at the top-left of your Jupyter Notebook
2. Under "Download as", select "Notebook (.ipynb)"

