


RDM 102:

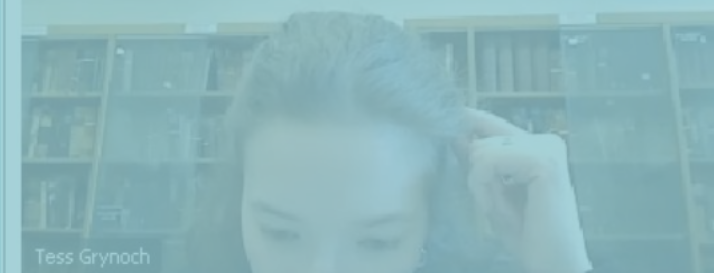
The Instructor Experience

Tess Grynoch

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 @Te_Gryn

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Beyond Research Data Management for Biomedical & Health Sciences Librarians



RDM 102 Spring 2019

Participants

Badges

Grades

 Welcome to RDM 102:
Beyond Research Data
Management for
Biomedical & Health
Sciences Librarians!

Mentors Only

Pre-Course

JupyterHub

Week 1: Feb 20 - 26

Week 2: Feb 27 - Mar 5

Week 3: Mar 6 - 12

Week 4: Mar 13 -19

Week 5: Mar 20 - 26

 Catch-Up Week: Mar 27 -
Apr 5 Final Project &
Presentation Week: Apr 8 -
12

Details

- Feb. 20 – Apr. 12, 2019
 - 5 content weeks
 - 1 catch up week
 - 1 final project presentation week
- NNLM Training Office based out of the University of Utah
- 35 Students
- Other Instructors:
 - Shirley Zhao
 - Margaret Henderson
 - Leah Honor

Objective of the Course

Provide an introduction to the support of data science and open science with the goal of developing and implementing or enhancing data science training and services at the students' institutions.

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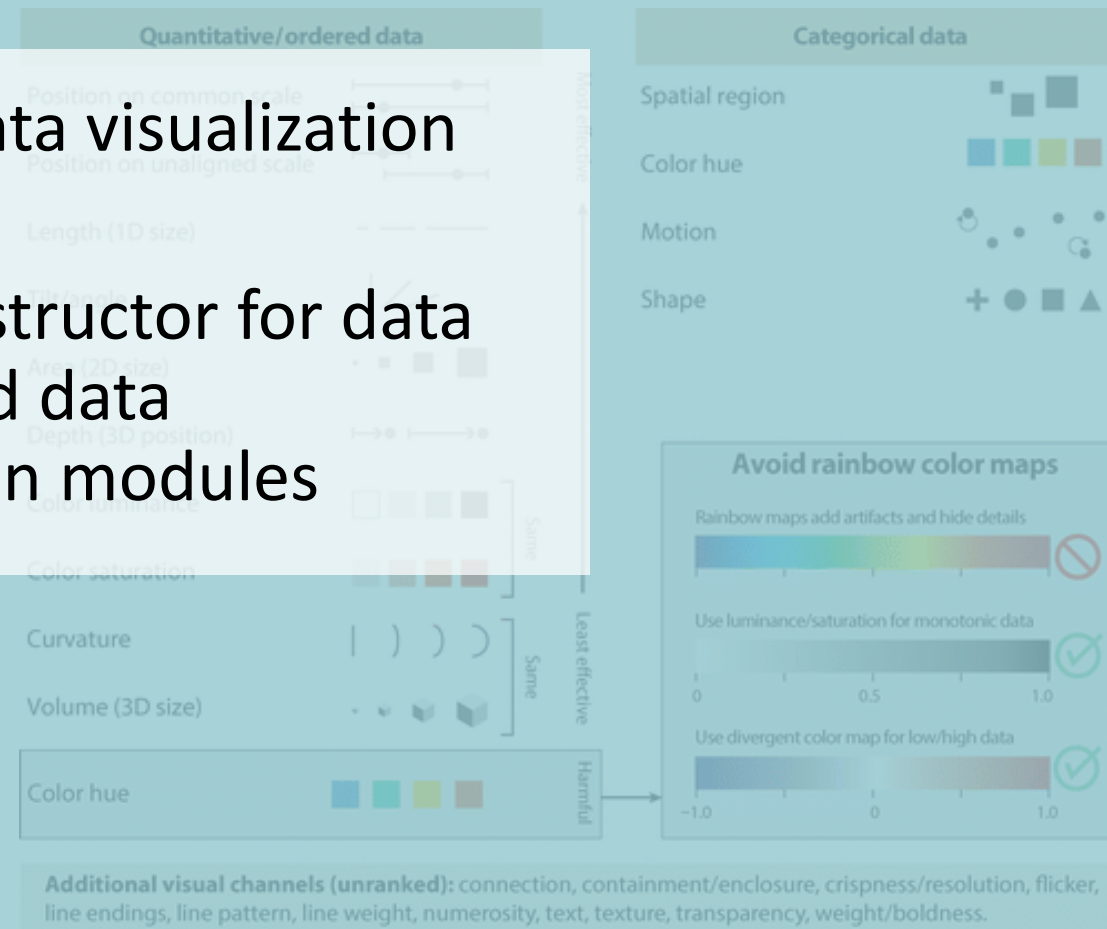
Final Project &
Presentation Week: Apr 8 -
12

Modules

1. Open Science and Data Science
2. Data Literacy
3. Data Wrangling
4. Data Visualization
5. Leadership

My Role as Instructor

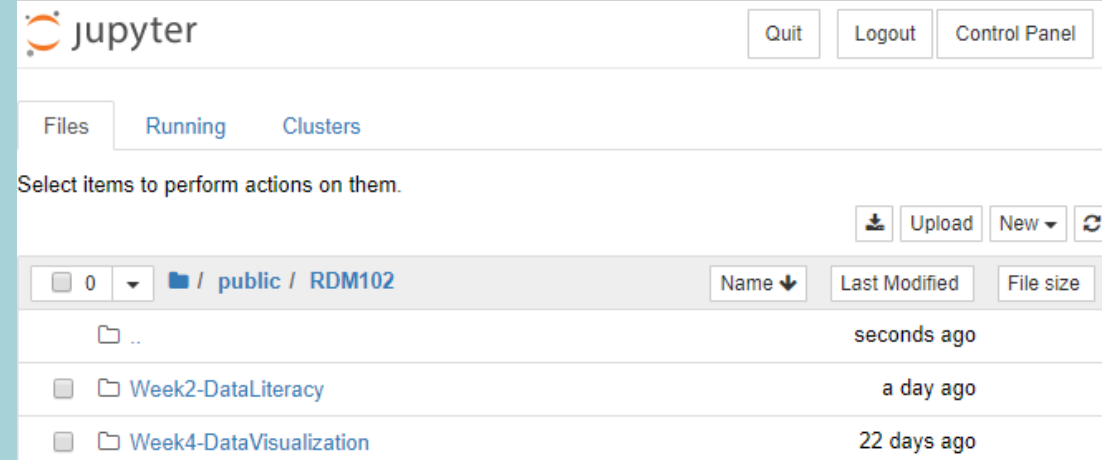
- Develop data visualization module
- Primary instructor for data literacy and data visualization modules



Visualization should match the data's story

My takeaways

- New tools: Moodle and Jupyter Hub



The screenshot shows the Jupyter Hub interface. At the top, there are buttons for 'Quit', 'Logout', and 'Control Panel'. Below these are tabs for 'Files', 'Running', and 'Clusters'. A message says 'Select items to perform actions on them.' There are buttons for 'Upload', 'New', and a refresh icon. A file list is shown with columns for 'Name', 'Last Modified', and 'File size'. The list includes a folder named 'public / RDM102' and two subfolders: 'Week2-DataLiteracy' and 'Week4-DataVisualization'.

Research Data Management for Librarians 102 - Spring 2019

Dashboard / My courses / RDM 102 Spring 2019

Welcome to RDM 102: Beyond Research Data Management for Biomedical & Health Sciences Librarians!

This course is a rigorous online training course going beyond the basics of research data management, sponsored by the National Library of Medicine (NLM) and the National Network of Libraries of Medicine Training Office (NTO). We will build on concepts covered in *RDM 101: Biomedical and Health Research Data Management Training for Librarians*, and threaded throughout will be the librarian's role in research reproducibility and research integrity. You will also practice using Jupyter Notebooks through an open-source browser-based application (JupyterHub) that allows you to create and share documents that contain live code, equations, visualizations, and narrative text.

The major aim of this course is to provide an introduction to the support of data science and open science with the goal of developing and implementing or enhancing data science training and services at your institutions. This material is essential for decision-making and implementation of these programs, particularly instructional and reference services.

We also hope this course will help you build your confidence in discussing relevant issues in RDM, data science, and open science and in contributing to the growing community of information professional with expertise in this area.



Administration

- Course administration
 - Edit settings
 - Turn editing on
 - Course completion
 - Users
 - Filters
 - Reports
 - Gradebook setup
 - Badges
 - Backup
 - Restore
 - Import
 - Reset
 - Question bank

Week 2 Assignment

Calculating Mean, Median, Mode in R

```
In [2]: #Use a hashmark to comment - this code will not run
#The first step is to import the data. We'll be using titanic passenger data in this demo.
titanic <- read.csv("titanic.csv") #In this function, I'm importing the data and assigning it to an object, titanic
#which acts as a type of nickname for the data (I just added a comment to the end of a function's line!)
```

```
In [4]: #Let's see what the titanic dataset looks like using the head function to look at the first 6 rows
head(titanic)
```

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.2500		S
2	1	1	Cumings, Mrs. John Bradley (Florence Briggs Thayer)	female	38	1	0	PC 17599	71.2833	C85	C
3	1	3	Heikkinen, Miss. Laina	female	26	0	0	STON/O2. 3101282	7.9250		S
4	1	1	Futrelle, Mrs. Jacques Heath (Lily May Peel)	female	35	1	0	113803	53.1000	C123	S
5	0	3	Allen, Mr. William Henry	male	35	0	0	373450	8.0500		S
6	0	3	Moran, Mr. James	male	NA	0	0	330877	8.4583		Q

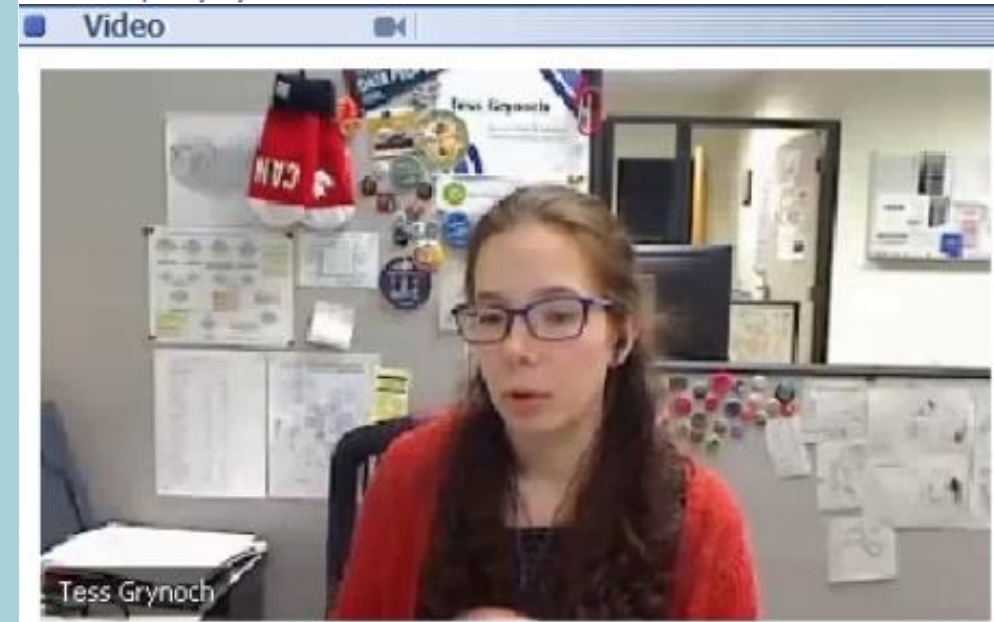
```
In [3]: #We can also see all the data by simply typing titanic
titanic
```

PassengerId	Survived	Pclass	Name	Sex	Age	SibSp	Parch	Ticket	Fare	Cabin	Embarked
1	0	3	Braund, Mr. Owen Harris	male	22	1	0	A/5 21171	7.2500		S
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My takeaways

- New tools: Moodle and Jupyter Hub
- Weekly feedback form and summary post
- Mixture of learning activities
- Synchronous, recorded office hours
- Starting module weeks on a Wednesday

General Discussion and Questions for Week 4	
Introduction to Week 4	✓
Reading: Visualization of Biomedical Data	✓
Lecture: Data Visualization Best Practices Part 1	✓
Activity: Which chart should you use?	✓
Lecture: Data Visualization Best Practices Part 2	✓
Activity: What's wrong with these charts?	✓
Lecture: Data Visualization Best Practices Part 3	✓
Lecture: Data Visualization Best Practices Part 4	✓
Activity: Make my chart 100% hotter!	✓
View: A Data Point Walks Into a Bar: Designing Data for Empathy by Lisa Charlotte Rost	✓



Future improvements to the course

- More videos about how to use Jupyter Notebook
- More defined syllabus
- More complex data to work with for the data visualization assignment
- More examples/ perspectives
- Moving office hours to Monday