

# **Rethinking Engagement:**

Supporting Research & Student Success through  
Statistical Consulting

# Agenda

1. About me
2. Data Services at the University of Oregon
3. Partnership formation and founding a service
4. Guiding principles of the service
5. Emerging challenges
6. Gauging Impact
7. Future of the Service

# About Me

Jonathan O. Cain

Head, Data Services + Interim Director of Digital Strategies

Academic Background:

- BS, Anthropology
- MA, Africana Studies
- MS, Library and Information Studies

Certification:

- Tidyverse Trainer
- Data Carpentries Instructor



## Schill announces interdisciplinary data science initiative



September 8, 2017 - 3:39pm

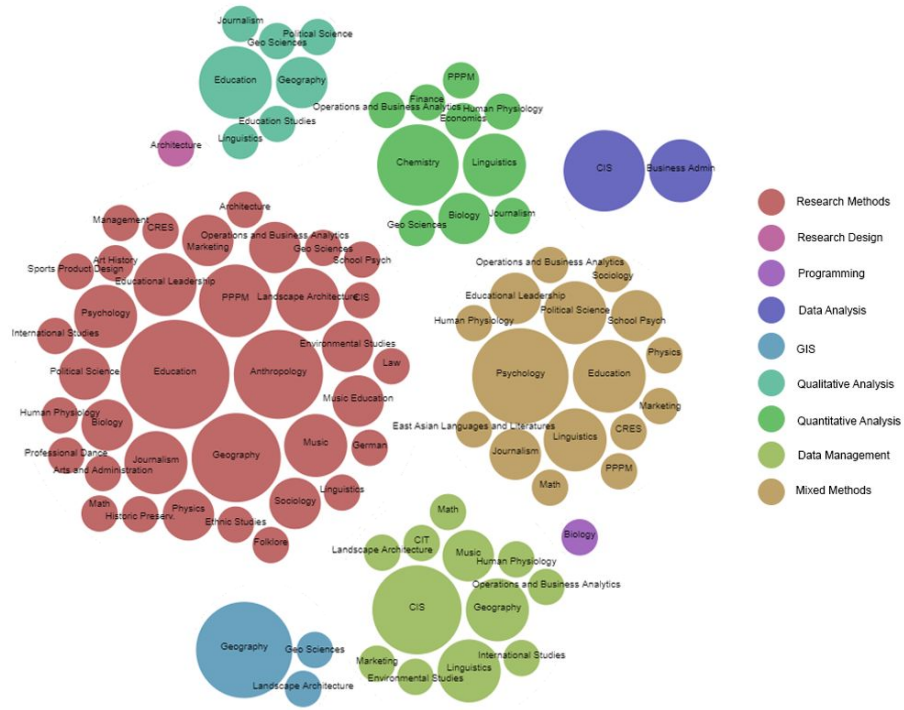
[Twitter](#) [Facebook](#)

The background of the slide is a dark green field filled with a complex network of thin, light green lines connecting small, semi-transparent green circular nodes. The nodes are scattered across the frame, creating a web-like or molecular structure. The overall effect is one of digital connectivity and data flow.

# Oregon's Data Science Initiative

*Empowering people with data*

## University of Oregon Research and Data Course Offerings by Department



**UO Libraries Proposal to the Graduate School:  
Providing Statistical Consultations and Support Services (SCSS) in the Libraries**

December 6, 2018

For the 2019-2020 academic year, the UO Libraries proposes a partnership with the Graduate School that would create a co-sponsored, one-year pilot program, **Statistical Consultations and Support Services (SCSS) for UO students**. In this partnership, the UO Libraries would host, manage, and provide space for the pilot program through its Data Services department, led by Jonathan Cain. The Libraries would provide funding for a part-time Statistical Services Specialist (Classified Staff, Research Analyst 1, 0.50 FTE), and wages and OPE for two part-time graduate employees (GEs, Level II, .49 FTE each). We ask the Graduate School to fund the two GEs' tuition waivers, fee subsidies, and health benefits through the Institutional Priorities (IP) program.

- **The Statistical Consultations and Support Services (SCSS) for UO students is a** co-sponsored, one-year pilot program
- UO Libraries hosts, manage, and provide space for the pilot program through its Data Services department
- Partially funded by the Graduate School and the Libraries
- In analysis of UO's 2017-2018 catalog of courses, **we identified 141 classes pertaining to statistics, data analysis, or research methods** offered by UO. These classes span colleges, schools, departments and disciplines





- **Diversity: Who is in the room? What is the demographic makeup of a group?**
- Inclusion: What is the cultural climate of a group? Does everyone feel like they are a part of the group once they're in the room?
- **Equity: Does everyone in the group have the same opportunity to achieve at the same level, no matter where they started?**
- Berkeley Institute for Data Science

## THE STUDY OF DATA SCIENCE LAGS IN GENDER AND RACIAL REPRESENTATION

By General Assembly



In the past few years, much attention has been drawn to the dearth of women and people of color in tech-related fields. A recent article in Forbes noted, “Women hold only about 26% of data jobs in the United States. There are a few reasons for the gender gap: a lack of STEM education for women early on in life, lack of mentorship for women in data science, and human resources rules and regulations not catching up to gender balance policies, to name a few.” Federal civil rights data further demonstrate that “black and Latino high school students are being shortchanged in their access to high-level math and science courses that could prepare them for college” and for careers in fields like data science.

## Meet the Consultants

### Jay Matonte

Jay Matonte is a 2nd year graduate student in the Planning, Policy, and Public Management department obtaining concurrent masters degrees in Community and Regional Planning and Public Administration. Before coming to the University of Oregon, Jay attended Montana State University and obtained a M.S. in Applied Economics with a concentration in developmental economics. Currently, Jay studies economic development, Opportunity Zones, and real estate economics.

#### Expertise:

- Stata
- SAS
- ArcGIS
- QGIS
- Excel

#### Expanding Software Interests

- R
- Python
- MySQL

### Yuan Fang

Yuan Fang is a third year international PhD student in archaeology. She speaks both Mandarin and English. Her master's thesis was on the prevalence of horse mortuary figures in the Han Dynasty tombs in China. Yuan's current research focuses on artistic designs on Chinese bronze vessels from the Xia, Shang, and Zhou dynasties using social network analysis. Yuan was a statistics minor during undergraduate period and has been using R to solve research questions in various disciplines including geography, sociology, and anthropology.

#### Expertise:

- R
- Git
- Linear Regression
- Cluster Analysis

### Alicia DeLouize

Alicia DeLouize is a 3rd year PhD Student in Biological Anthropology who has previously completed a Master's in Psychological Science. Her main lines of research are global health and human evolutionary biology. Currently, she is focusing on the evolution of the biomolecular mechanisms behind aging and lifespan length. By taking a multidisciplinary approach, she uses human biology and health, psychology, anthropology, sociology, and evolutionary systems to understand health and disease at the microbiological, personal, and population levels. You can follow her work at [https://www.researchgate.net/profile/Alicia\\_DeLouize](https://www.researchgate.net/profile/Alicia_DeLouize).

#### Expertise:

- R
- SPSS
- AMOS
- STATA
- Data Management (Excel/Access/Electronic Data Capture)
- Scale Development
- General Linear Model (t-test, ANOVA, regression, ect.)
- Generalized Linear Model (log, logit, probit, ect.) Nonparametric Statistics (Chi-squared, Kruskal-Wallis, Mann-Whitney U, ect.)
- Structural Equation Modeling
- Latent Variable Analysis
- Factor Analysis (PCA, PFA, EFA, ect.)
- Multilevel Modeling
- Mixed-Effect Models
- Phylogenetic Analysis
- Longitudinal and Survival Analyses
- Complex Samples
- Power Analysis

# Building Inclusively

- Include diverse experts
- Develop inviting & culturally competent curriculum
- Consider the whole learner- not everyone's experience is the same
- Keep the cost low (or free)
- Make it available
- Recruit heavily from non traditional communities
- Provide accurate expectations
- Demonstrate value



# Data Services Consultations

Free Statistical Consultations for  
UO Graduate and Undergraduate Students!

## DATA SERVICES

- The pilot program is staffed by:
  - a. 1 half-time classified-staff position
  - b. 2 part-time graduate student positions as defined Statistical Consultants
  - c. 1 Data Services GE works closely to support programming, GIS and other data science support closely aligned with the project
  - d. 2 NTTF Librarians provide logistical and instruction support



[Jonathan Cain](#)  
Interim Director, Digital Strategies  
✉ [jocain@uoregon.edu](mailto:jocain@uoregon.edu)  
📅 [Schedule an appointment](#)

Department  
Data Services  
Subject Areas  
Data Management, Planning, Public Policy & Management  
[My research guides](#)



[Gabriele Hayden](#)  
Research Data Management and  
Reproducibility Librarian  
✉ [ghayden@uoregon.edu](mailto:ghayden@uoregon.edu)  
📅 [Schedule an appointment](#)

Department  
Data Services  
Languages  
French (Basic Written), French (Basic Spoken), German (Basic Written), Portuguese (Basic Written), Spanish (Fluent Written), Spanish (Fluent Spoken)



[Cameron Mulder](#)  
Statistical Consultant  
✉ [cmulder7@uoregon.edu](mailto:cmulder7@uoregon.edu)  
📅 [Schedule an appointment](#)

Department  
Data Services

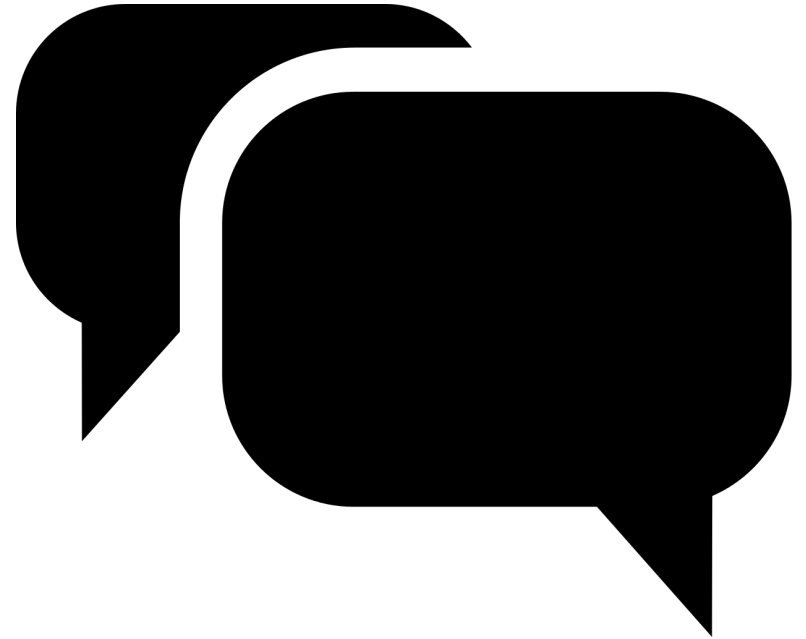


[Kathleen Stroud](#)  
David and Nancy Petrone Cartographic and  
Spatial Data Librarian  
✉ [kstroud@uoregon.edu](mailto:kstroud@uoregon.edu)

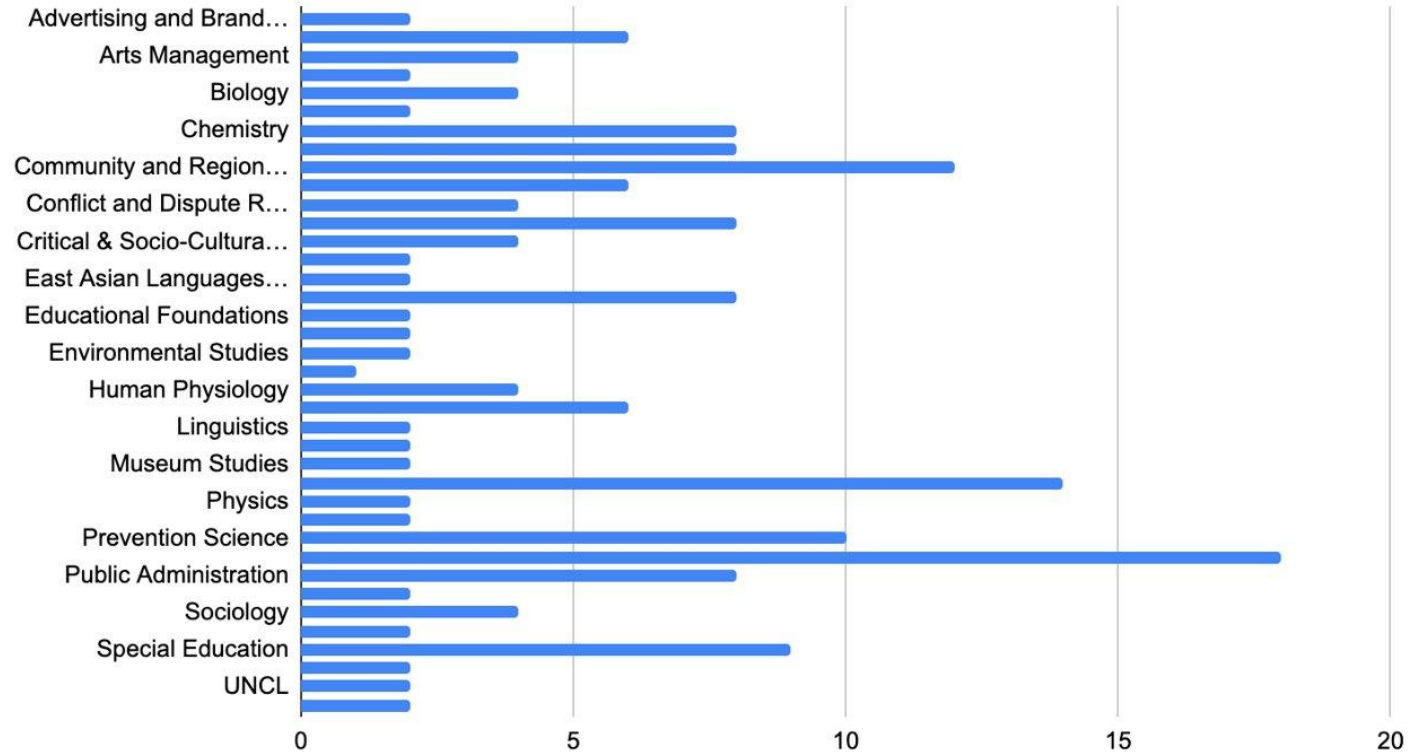
Department  
Data Services  
Sub-unit  
Map Library

Between **October 7, 2019** and **November 27, 2019**:

- **164** Student Consultations
- **39** Graduate Students **unique visits**
- **60% repeat users**
- Students from most disciplines, from Spanish to Psychology to Chemistry



## Programs Represented



# Library Workshop Descriptions



Information, materials, and schedules for all currently offered library workshops

- Start Here
- Install Night
- Citation Management Software
- Statistics
- Excel for Research
- R
  - Introduction to R in Chinese**
  - Master the Tidyverse Workshop Series
- Python
- Version Control (git/GitHub)
- GIS
- Omeka Classic
- Copyright & Fair Use
- Digital Publishing
- Digital Projects
- Wordpress
- Open Educational Resources
- Citizen Science
- Data Management Plans using DMPtool.org

## Introduction to R in Chinese

Software:	<a href="#">R</a> , <a href="#">RStudio</a>
Duration:	60 min
Room description:	Varies. Often held in <a href="#">Knight Library 267b</a> or the Knight Library <a href="#">DREAM Lab</a> workshop space
Prerequisites:	<ul style="list-style-type: none"><li>• Comfortable installing and exploring new software</li><li>• Ability to write one- and two-line sample code in a text editor</li></ul>
Skills Taught / Learning Outcomes:	<ul style="list-style-type: none"><li>• Setting up R and RStudio</li><li>• Introduction to RStudio basics in Chinese</li></ul>
Class Materials:	See below for class PPT and R script
Related Classes:	<a href="#">Master the Tidyverse workshop series</a> <a href="#">Click here</a> to sign up for this workshop series.

### Additional Training Materials:

-  [Introduction to R in Chinese PPT](#)  
workshop PPT
-  [Introduction to R in Chinese R Script](#)  
R script

[<< Previous: R](#)

[Next: Master the Tidyverse Workshop Series >>](#)

# Corona Virus Disease

# #COVID19



World Health  
Organization



# In Person to Online

- As a result of our success we had begun designing and online presence
- Departmental culture of flexibility, prototyping, and outreach has made us leaders in this effort in the libraries
- Emphasis on instruction and consultation translates well to online activities
- Relationships with resource holders offer new tools for delivery



Important update: Library locations are on regular or reduced open hours the week of 3/15 - 3/21. Please check the links under Today's Building Hours on the [Libraries home page](#) for current open hours. Additionally, access to all UO Libraries branches will be limited to current UO faculty/staff/students as of Wednesday, March 18. Need information about Canvas and online classes? Please visit the [Canvas Support Documentation](#) page.

## Data Services Consultations

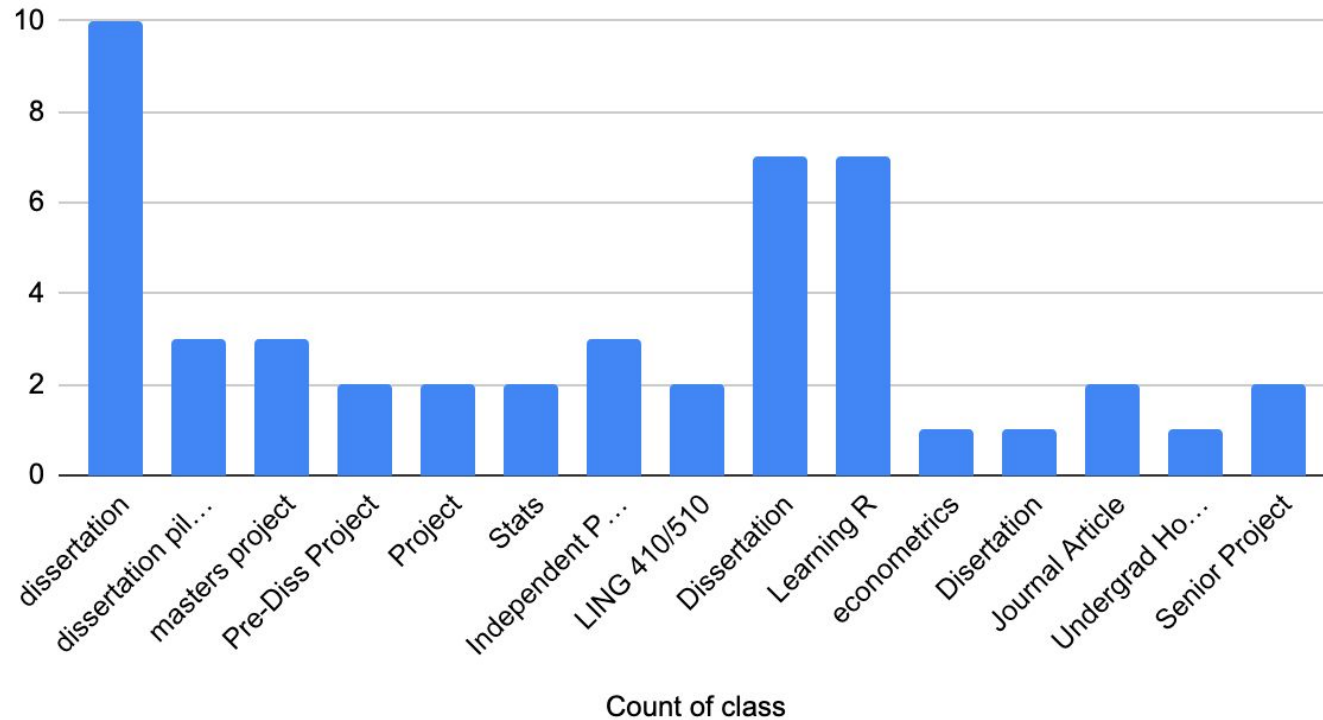
Statistical consulting (pilot) for graduate and undergraduate students.

[Schedule Statistical Consulting Appointment](#)

In support of social distancing, all of our workshops and consultations will be offered remotely until such time as the library and the university revert to normal operations. When you schedule a consultation we will reply with instructions on how to connect remotely.

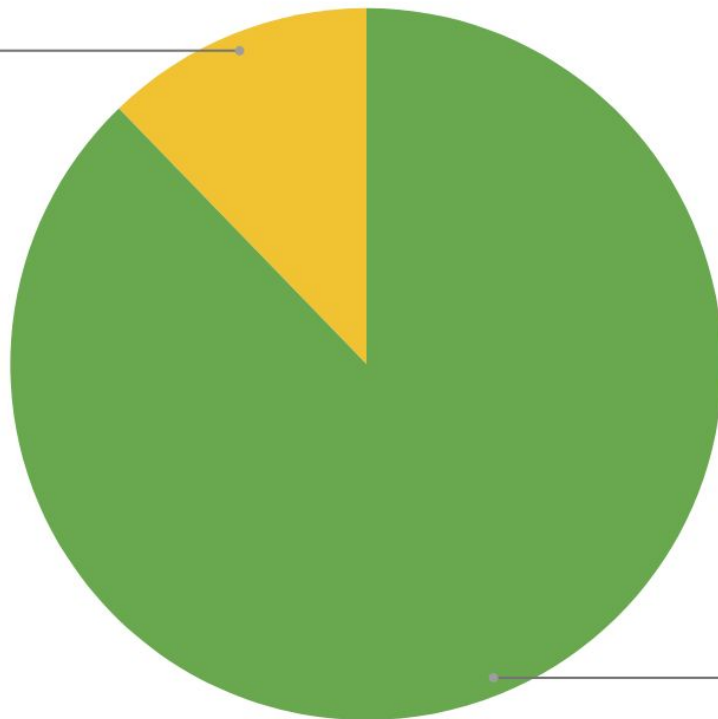
- Drop-in hours are Monday to Friday 11 a.m. to 4 p.m during the term--check back here in the next few days for instructions on how to "drop in" remotely during the Spring Term. During finals week and between terms, ~~please schedule an appointment through the link above~~
- Location: Remote for now. Normally, Data Services desk ([Knight Library main floor](#), in the back, to the right of the central stairway).
- Consultation support for R, Python, statistics, SPSS, Stata, relational databases (SQL) as well as other software and tools on request.
- Each of our consultants have different strengths. Scroll to the bottom of this page to learn more about each consultant.
- Need an appointment outside times available through the link above, or just need to ask a question? No problem! Email: [DataServices@uoregon.edu](mailto:DataServices@uoregon.edu)

## Count of class



## Count of Drop\_Sched

Drop-in  
12.2%



Scheduled  
87.8%

# Future of the Service

- Initially renewed for a second year of pilot program
- Campus-wide GE freeze, reducing the staffing
- Reduction in live and new workshop content
- Switch to self directed lessons on campus learning management system
- Eliminate drop-in service
- Expand curricular connections
- Begin fee service for grant inclusion