

# YData: An Introduction to Data Science

## Lecture 01: Introduction

Jessi Cisewski-Kehe and John Lafferty  
Statistics & Data Science, Yale University  
Spring 2019

Credit: [data8.org](https://data8.org)



# YData: Instructors



**Jessi Cisewski-Kehe**

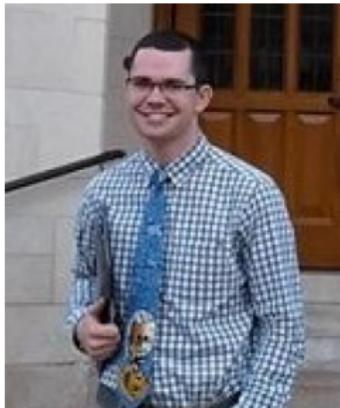


**John Lafferty**

# YData: Teaching fellows



**Brandon Chow**



**Parker Holzer**



**Prateek Malik**

## Course website

<http://ydata123.org/sp19/>

YData website: <http://ydata123.org>

# What is Data Science?

Drawing useful conclusions from data using computation

- **Exploration**

- Identifying patterns in information
- Uses visualizations

- **Inference**

- Quantifying whether those patterns are reliable
- Uses randomization

- **Prediction**

- Making informed guesses
- Uses machine learning

- Data science is driven by applications
- Every data-driven subject brings new challenges
- YData Labs are small, independent courses taught by Yale faculty who are excited to share their expertise

[AddLabURL](#)

# Currently available YData Seminar Courses

YData: ExoStatistics: Exploring Extra-solar Planets with Data Science  
(S&DS 170) Jessi Cisewski-Kehe



YData: Text Data Science: An Introduction  
(S&DS 171) John Lafferty

YData: Data Science for Political Campaigns  
(S&DS 172) Joshua Kalla

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# Course Structure

- Three lectures per week
- Weekly homework assignments
- Three projects
- **List office hours**
- Midterm during lecture hour on Wednesday, March 6, 2019
- Final exam scheduled on Sunday, May 5, 2019 at 2PM

Details can be found at [AddLinkToCoursePolicies](#)

## **Computational and Inferential Thinking: The Foundations of Data Science**

By Ani Adhikari and John DeNero ([Adhikari and DeNero, 2018](#))

Freely available at <https://www.inferentialthinking.com>

# Getting Help

- Ask a friend
- Ask on Piazza  
<https://piazza.com/yale/spring2019/sds123/home>
- Come to office hours

# Course Policies

Learning

Community

Course Staff

AddLinkToCoursePolicies

# Collaboration

## Asking questions is encouraged

- Discuss questions with each other (except on exams)
- Submit homework individually, but discuss with others
- Submit projects individually or with a partner

## The Limits of collaboration

- Don't share solutions with each other (except project partners)
- Copying or other dishonesty will result in failing the course

## Example

(DEMO)

## References

Adhikari, A. and DeNero, J. (2018), “Computational and Inferential Thinking,” Gitbook.