



# WELCOME TO CLASS!

**Introduction to Statistics**

# Staff

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# Modern Statistics

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Learning about data by applying statistical techniques.

## **1. Exploration**

- Identifying patterns in data
- Uses visualizations

## **2. Inference**

- Using data to draw reliable conclusions about the world

## **3. Prediction**

- Making informed guesses about unobserved data
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# Why data and programming?

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## **1. Data**

- Ubiquitous
- Need to make sense of it

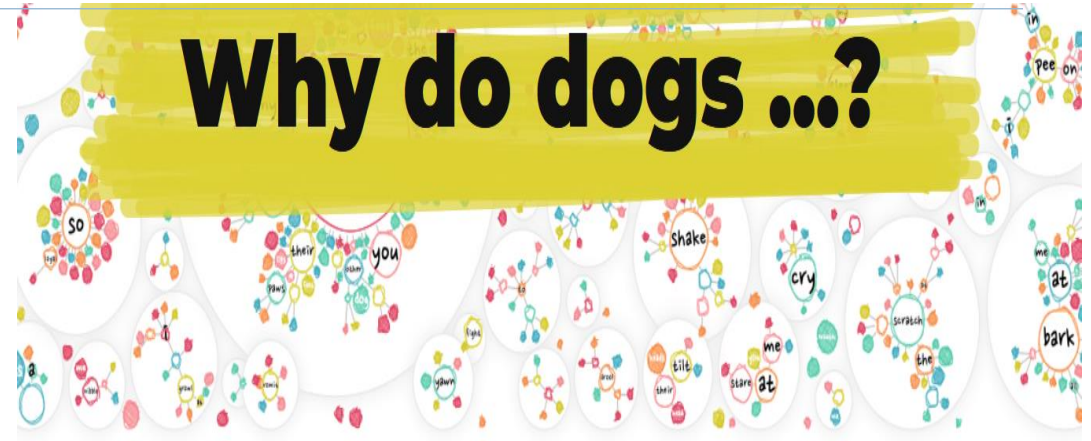
## **2. Applicable skills**

- Programming is great and flexible tool
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# Example

1. Many people ask questions about their dogs!
2. Ever wonder if a behaviour is unique to your dog, or if other dogs do the same?
3. Too many common questions!
4. We need to sort these questions into related groups!
5. Most common questions begin with "why ..."
6. Full exploration:  
<https://whydocatsanddogs.com/dogs>



# Course Structure

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## **1. Lecture**

- In person or virtual attendance
- Lab Q&A
- 10% - Video Quizzes (Due before Class on D2L)
- 10% - Reading Quizzes (Due after Class on D2L)

## **2. Jupyterhub Assignments**

- 15% - Labs
  - 15% - Homeworks
  - 20% - Projects
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# Course Structure

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## 3. Course Site

- <https://ipydatasci.github.io/spring2021/spring2021.html>
- Contains access to labs, homeworks and projects

## 4. Textbook

- <https://ipydatabook.github.io/chapters/intro.html>
- Free open source text by Ani Adhikari and John DeNero

## 5. Exams - 30% - Final and Midterm on D2L

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# Getting Help

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## **1. Lab Help Hours**

- 6 Lab Hours a week by Faculty

## **2. Piazza**

- Discussion boards where conceptual and computational questions can be asked. (Do not email these questions.)
- Will discuss after drop/add

## **3. Office Hours**

- Can be found on D2L
  - To discuss grade issues
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# Collaboration

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**Asking questions is greatly encouraged!**

## **1. Homeworks and Labs**

- Discuss these assignments with each other and instructors!
- Turn in own copy!
- **Never share code!**

## **2. Projects**

- Again discuss these assignments with each other and instructor!
- **Never share code outside of group!**

**Copying solutions is never permitted!**

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# First Day Worksheet

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**Go to <https://ipydatasci.github.io/spring2021/spring2021.html> and click on “First Day Worksheet”.**

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