Lecture 1

Introduction
Welcome to Data 8

- **The Foundations of Data Science**
  - What is this course about?
  - Who are the people instrumental in creating this course?
  - Logistical details
  - Let’s do some data science!

- **Data is everywhere**
Data 8 Summer Instructors

Vinitra Swamy  
Fahad Kamran
Data 8 Teaching Team

Vinitra Swamy    Fahad Kamran

Data 8 Course Staff
- (u)GSIs
- Tutors
- Lab Assistants

John DeNero, David Wagner, Ani Adhikari
Data Science
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 CONNECTOR COURSES

Companion Courses for Data 8

LEGALST 88
Taking Measure of the Justice System

STAT 88
Probability & Mathematical Statistics

COMPSCI 88
Computational Structures in DS

COGSCI 88
Data Science & the Mind

PSYCH 88
DS for Cognitive Neuroscience

UGBA 96-4 & 5
Data & Decisions

STAT 89A
Linear Algebra for Data Science

GEOG 88
Data Science Applications in Geography

L&S 88-1
Children in the Developing World

L&S 88-2
Sports Analytics

MCB 88
Immunotherapy of Cancer
Course Structure
Course Website

data8.org/su18
Parts of Data 8

● Lecture
  ○ Textbook: Computational and Inferential Thinking

● Assignments
  ○ 2 lab assignments per week
  ○ 2 homework assignments per week
  ○ 3 projects

● Exams
  ○ Midterm on Friday July 13 during lecture
  ○ Final exam on Thursday Aug 9, 5 PM to 8 PM

For further details, visit data.org/su18
Getting Help

- Ask a friend
- Ask on Piazza
- Come to office hours
  - (U)GSI office hours start this week in Cory 105
    - Tuesday 12 - 5, Thursday 12 - 4, Friday 12 - 4
  - Instructor office hours are in 416 Evans
    - Vinitra: M 10:30 - 11:30, W 2 - 3
    - Fahad: M 2 - 3, W 10:30 - 11:30
Course Policies

Learning

Community

Course Staff

data8.org/su18/policies
Collaboration

Asking questions is greatly encouraged
- Discuss questions with each other (except exams)
- Submit lab assignments individually; discuss in lab
- Submit homework individually, but feel free to discuss
- Submit projects individually or with a partner from your lab

The Limits of collaboration
- Don't share solutions with each other (except project partners)
- Copying or other dishonesty will result in failing the course
Let’s do some data science

(Demo)