



DATA 8

Summer 2018

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**
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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
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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

**DATA SCIENCE
CONNECTOR
COURSES**

Companion Courses for Data 8



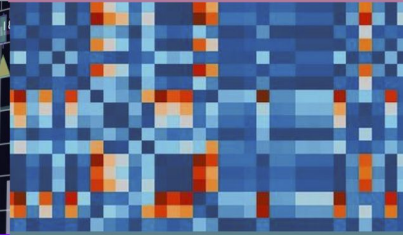
PSYCH 88

DS for Cognitive Neuroscience



UGBA 96- 4 & 5

Data & Decisions



STAT 89A

Linear Algebra for Data Science



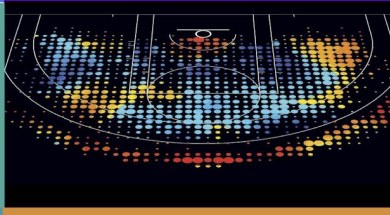
GEOG 88

Data Science Applications in Geography



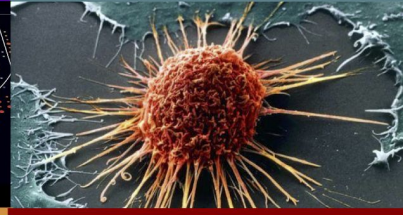
L&S 88-1

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
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Let's do some data science

(Demo)