

# Welcome to Data 8!

A photographer from the Division of Data Sciences will be present at the beginning and end of class to take photos for an article on Data 8 that will appear on the Division's website.

If you prefer not to be photographed, please sit on the far left side as you enter the auditorium.





# Lecture 1

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Introduction

# Welcome to Data 8

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Ramesh Sridharan



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[data8.org/sp20/staff](https://data8.org/sp20/staff)

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# Data Science

# What is Data Science?

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Learning about the world from data using computation

- **Exploration**

- Identifying patterns in data
- Uses visualizations

- **Inference**

- Using data to draw reliable conclusions about the world
- Uses statistics

- **Prediction**

- Making informed guesses about unobserved data
  - Uses machine learning
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# Connector Courses

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- Data science is driven by applications
- Every data-driven subject brings new challenges
- Most connectors are small, independent courses taught by Berkeley faculty who are excited to share their expertise
- Three connectors (CS 88, Stat 88, Stat 89A) go deeper into the theory and computation

<http://data8.org/connector>

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# Spring 2020 Connectors - Part 1



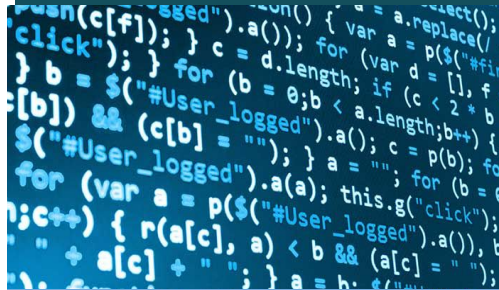
## STAT 88

Prob and Stats in Data Science



## UGBA 88

Data and Decision



## COMPSCI 88

Computational Structures



## PHYSICS 88

Data Science Applications in Physics

# Spring 2020 Connectors - Part 2



## **SOCIOL 88**

Data Science for Social Impact



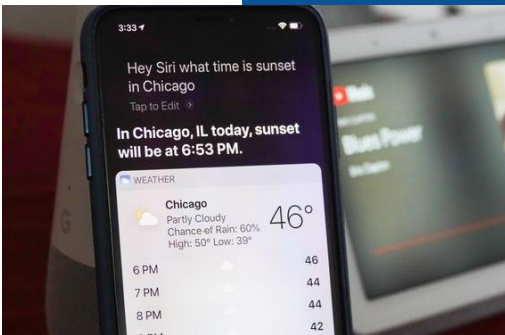
## **HISTORY 88**

How Does History Count?



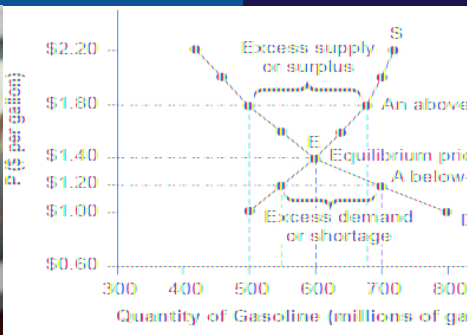
## **LEGAL STUDIES 88**

Taking the Measure of the U.S. Justice System



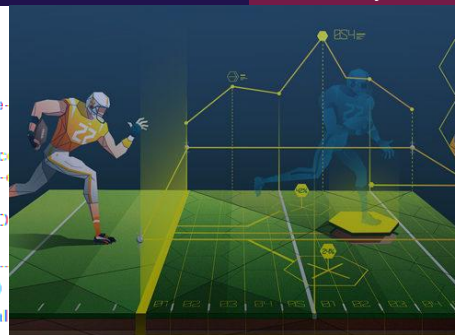
## **Data 88-1**

Language Models, Text Analysis



## **DATA 88-3**

Economic Models



## **DATA 88-2**

Sports Analytics



## **DATA 88-4**

Statistical Genomics



# Course Structure

# Course Website

<http://data8.org/sp20>

# Parts of Data 8

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- Lecture will be recorded and webcast, but it's better to attend
- Textbook is free, online, and written by Data 8 instructors
- Weekly lab assignments (**lab starts this week**)
  - Check your inbox for your lab assignment!
- Weekly homework assignments & three projects
  - Graded within about 1 week
- (U)GSI office hours Monday-Friday 12-5 (starts next week)
- Midterm on Friday, March 13, evening (exact time TBD)
- Final exam on Tuesday, May 12, 3-6PM (group 7)

Details are in [data8.org/sp20/policies.html](https://data8.org/sp20/policies.html)

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# Collaboration

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## 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 severe penalties
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# Getting Help

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- Ask a friend
- Ask on Piazza
- Come to office hours

# Course Policies

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Learning

Community

Course Staff

<http://data8.org/sp20/policies.html>

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# Example

(Demo)