

# CPSC 392

Dr. Chelsea Parlett-Pelleriti

# Who is this person?

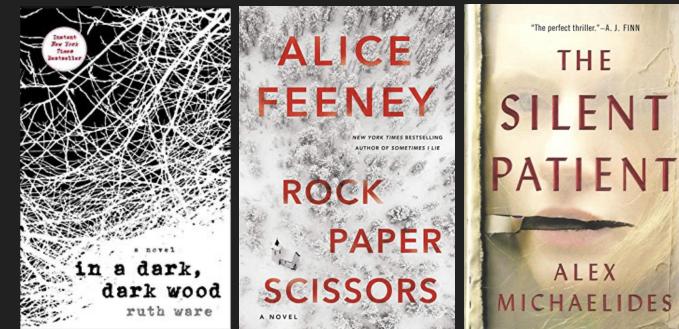


# Who is this person?

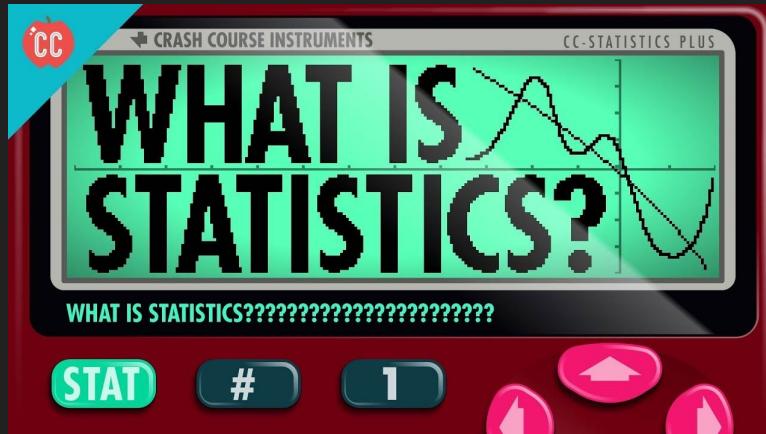


# Who is this person?

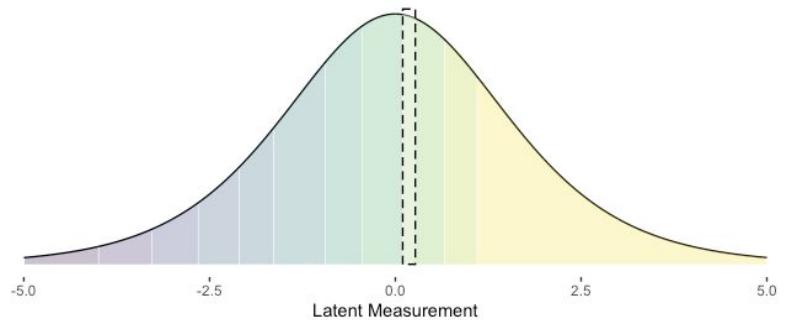
Dr. Chelsea Parlett-Pelleriti  
(she/her)



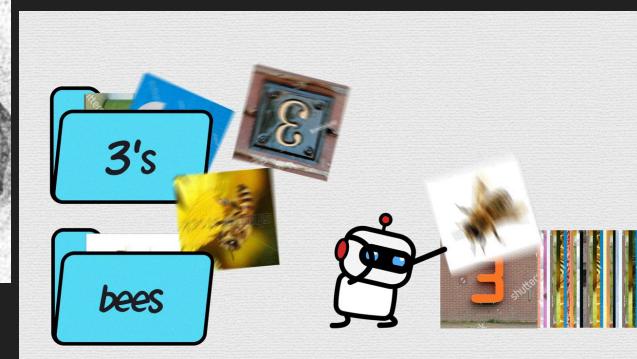
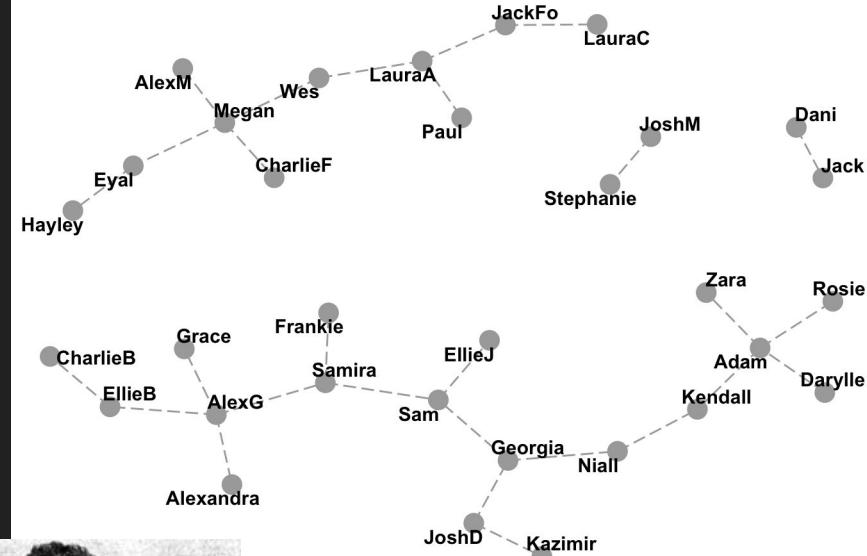
# Who is this person?



Cutoffs for Bet/JOL



Love Island 2018 (only couples)



# Who is this person?



# What Do Professors Do?

- Teaching
  - Course Prep
  - Lecturing
  - Grading
  - Admin
- Research
  - Writing Grants
  - Collecting Data
  - Analyzing Data
  - Surveying the Literature
- Service
  - Internal
    - Committees
    - Projects
    - Student Organizations
    - Mentoring
  - External
    - Peer Review
    - National Organizations
    - Mentoring
    - Writing
    - Conferences/Workshops

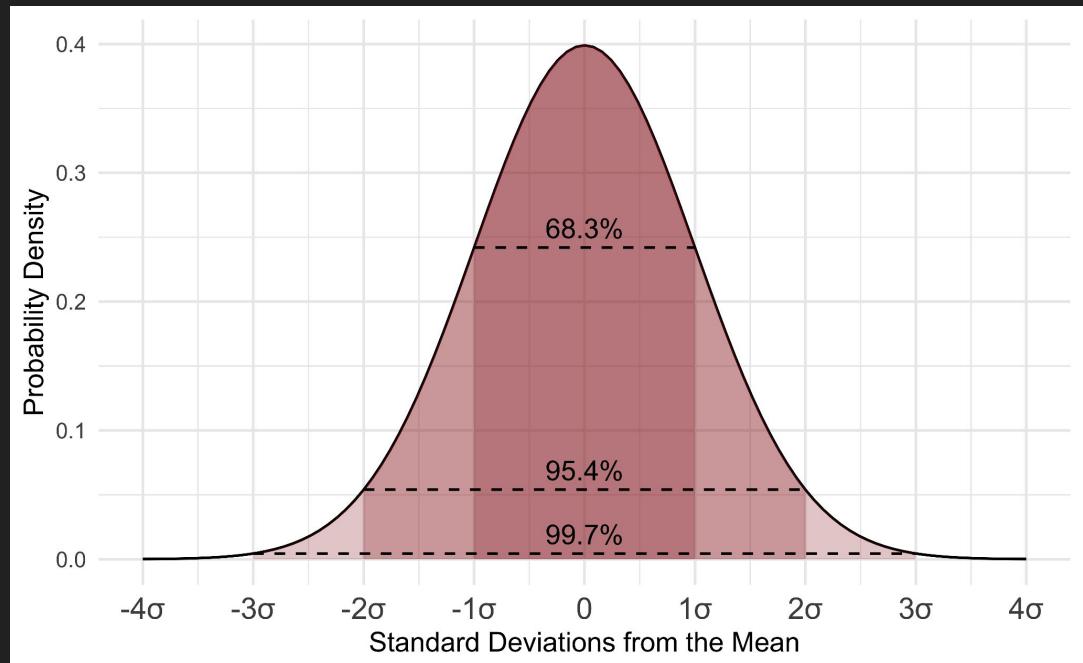
You?

# Course Admin

# What to Expect

- Pre-Reqs
- Canvas + GitHub
- Slack
- Office Hours
- Class Structure
- **Weekly Quizzes**
- **Homework (4)**
- **Tests (2)**
- **Final Project + Presentation**
- Content (we'll get to that in a sec)

# Pre-Reqs



# Canvas + GitHub

# Schedule

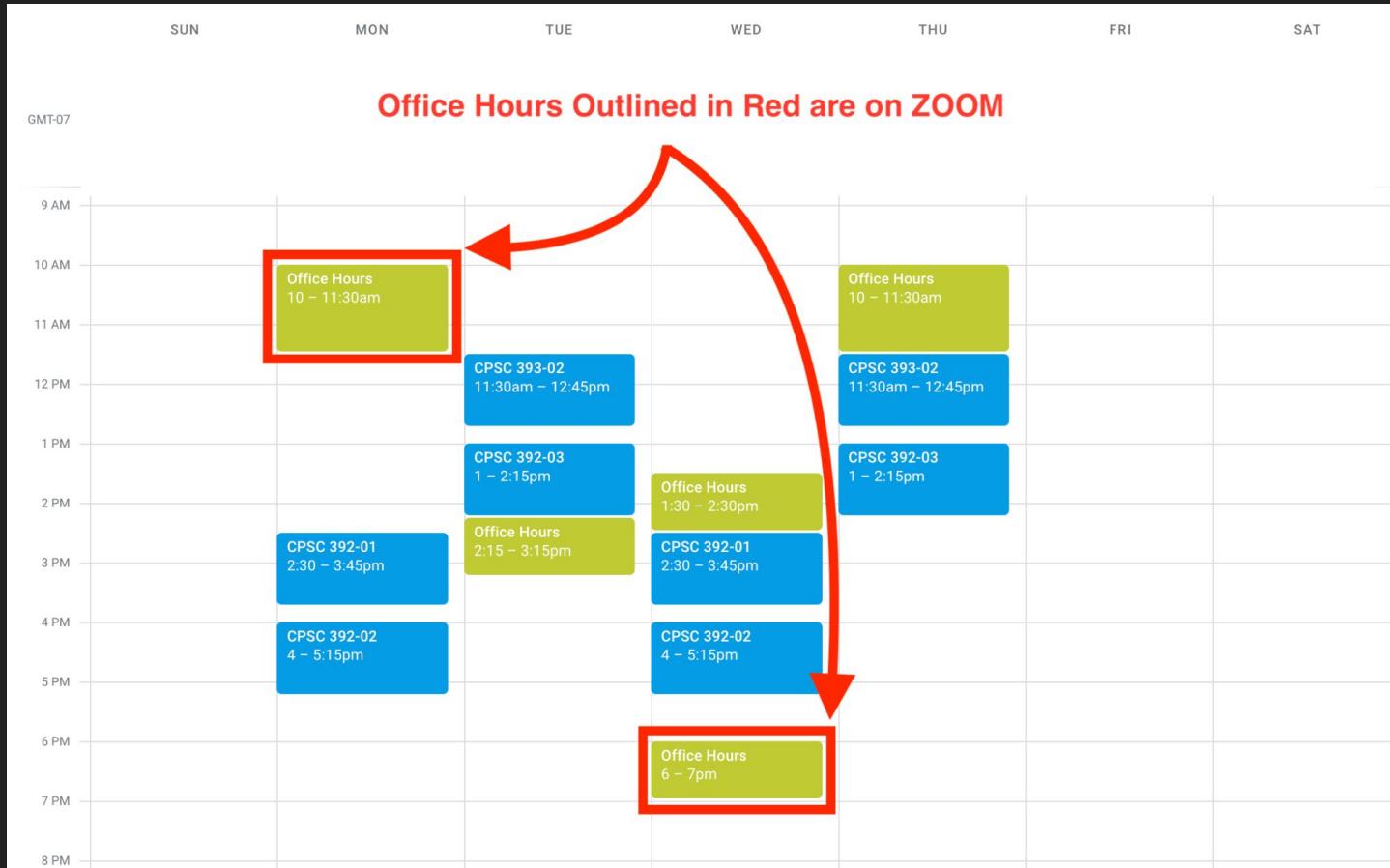
Section	Week	Class	Topic	Notes
<i>Admin and Review</i>	1	0	Intro	
<i>Admin and Review</i>	1	1	All the Stuff You Need To Know (Python)	Quiz
<i>Admin and Review</i>	2	2	Debugging (Optional)	
<i>Admin and Review</i>	2	3	All the Stuff You Need To Know (Math)	Quiz
<i>Admin and Review</i>	3	4	Data Visualization I	
<i>Admin and Review</i>	3	5	Data Visualization II	Quiz

Slack



# Office Hours

In Person > Zoom > Slack



# Office Hours

1. **Clarification**: seek explanations or clarifications about concepts, assignments, or course material that I find challenging
2. **Questions**: ask questions related to lectures, readings, assignments, or projects.
3. **Feedback**: get feedback on assignments or exams to understand my performance and how to improve.
4. **Discussion**: have in-depth discussions about the subject matter, exploring topics further
5. **Guidance**: guidance on study strategies, time management, or how to succeed in the course.
6. **Career Advice**: advice and resources related to future career/internship opportunities

# No Book



# Book

## ☞ Readings (optional, all books free)

---

- Python Data Science Handbook (Beginner book + code)
- Introduction to Statistical Learning (Intermediate Book + code)
- Elements of Statistical Learning (Advanced Book)

# Reading (Optional)

Topic	PDSH	ISLP	ESL
Pandas/Numpy	Chapters 2,3	Chapters 2.3.3	
Visualization	Chapter 4 (mpl, sb)	Chapters 2.3.4 (mpl)	
Linear Regression	Chapters 5.3, 5.6	Chapters 2.2.2, 3, 5	Chapters 2.3.1, 3.2, 7.2, 7.3, 7.10
LASSO/Ridge (Regularization)	Chapter 5.6	Chapter 6.2	Chapter 3.4, 3.8
Logistic Regression		Chapter 4.3	Chapter 4.4
Decision Trees/Tree Based Models	Chapter 5.8	Chapter 8.1, 8.2	Chapters 9.2, 10.10.2, 15

# Disclaimer

**Chelsea Pelleriti**

@ChelseaPelleriti 1.91K subscribers 122 videos

Data Science, Statistics, R, and Python Videos that are clear, approachable,... >

Customize channel Manage videos

HOME VIDEOS PLAYLISTS COMMUNITY CHANNELS ABOUT

Latest Popular Oldest

Generative Models II

CPSC 393

24:17

Generative Models I

CPSC 393

35:31

Transformers II

CPSC 393

22:04

Transformers I

CPSC 393

20:01

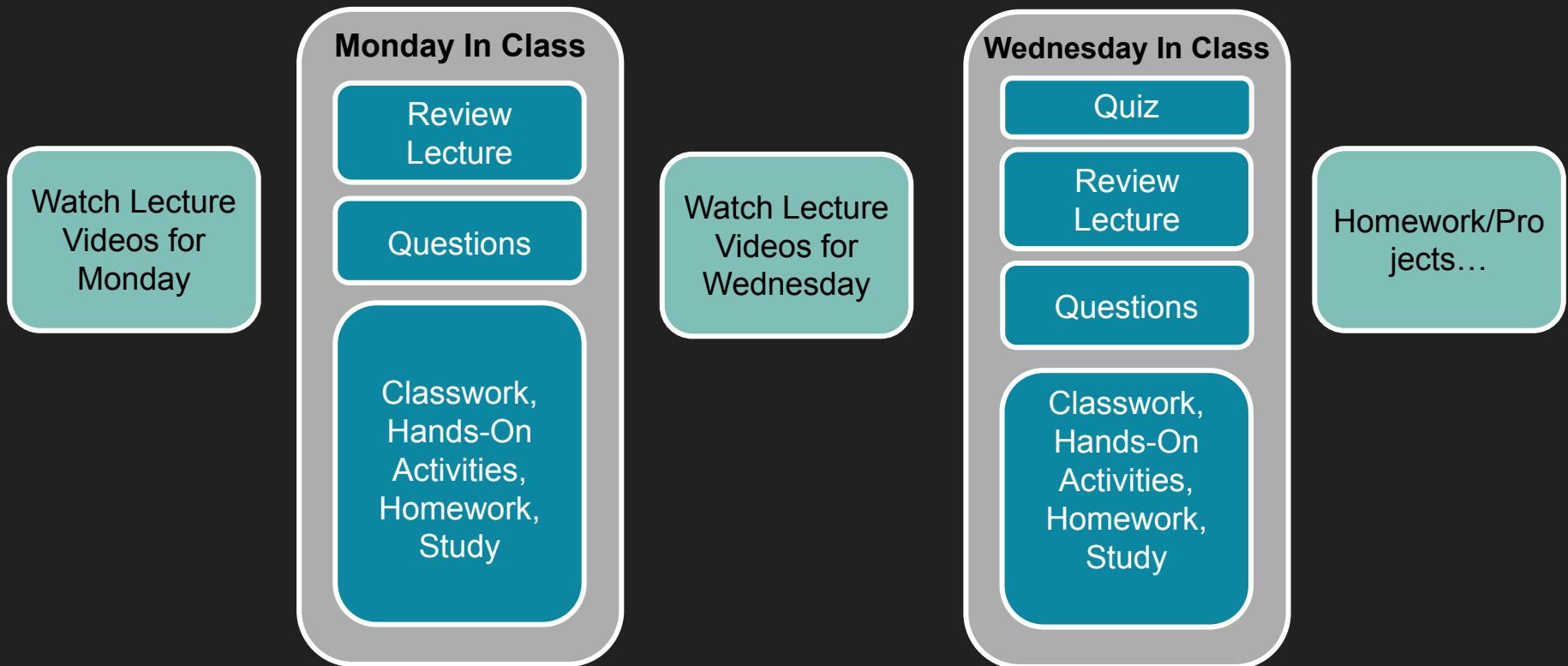
**CPSC 393 || Lecture 24 Generative Models II**  
209 views • 3 months ago

**CPSC 393 || Lecture 22 Generative Models I**  
259 views • 3 months ago

**CPSC 393 || Lecture 20 Transformers II**  
207 views • 3 months ago

**CPSC 393 || Lecture 19 Transformers I**  
334 views • 3 months ago

# Typical Week Workflow



# Typical Week Workflow

Watch Lecture Videos for Tuesday

## Tuesday In Class

Review Lecture

Questions

Classwork,  
Hands-On Activities,  
Homework,  
Study

Watch Lecture Videos for Thursday

## Thursday In Class

Quiz

Review Lecture

Questions

Classwork,  
Hands-On Activities,  
Homework,  
Study

Homework/Projects...

**Watch  
Lecture**

**In Class**

**Review  
Lecture**

**Questions**

**Classwork,  
Hands-On  
Activities,  
Homework,  
Study**

Like textbook reading, so we all start with the same baseline

Watch Lecture

In Class

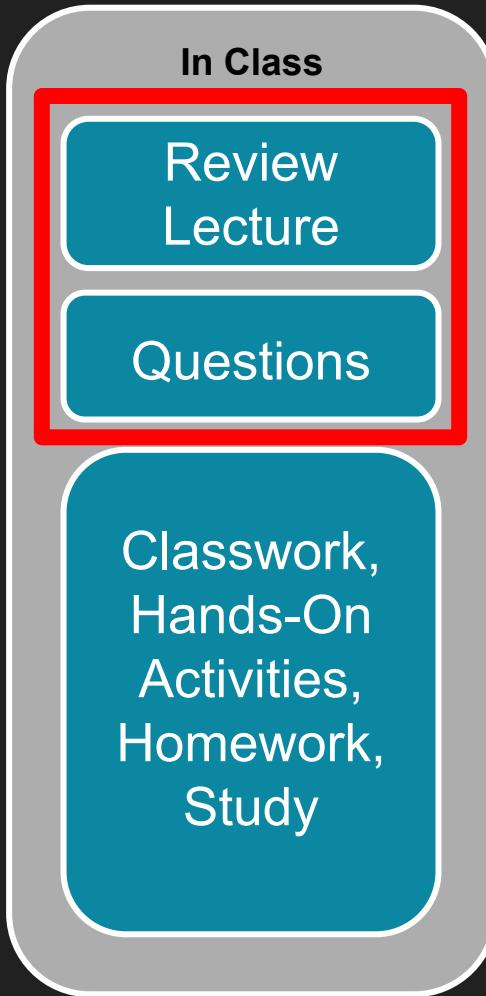
Review Lecture

Questions

Classwork,  
Hands-On Activities,  
Homework,  
Study

**Watch  
Lecture**

Reinforce material,  
get questions



Watch  
Lecture

In Class

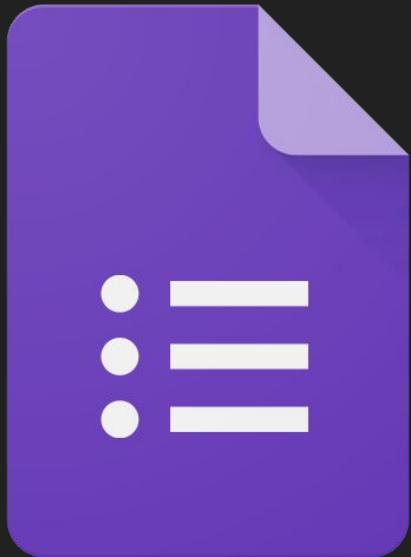
Review  
Lecture

Questions

Classwork,  
Hands-On  
Activities,  
Homework,  
Study

Practice, Active  
Learning, Deeper  
Understanding,  
Teach-to-Learn

# Survey



**[bit.ly/Fall23CPSC392Survey](https://bit.ly/Fall23CPSC392Survey)**

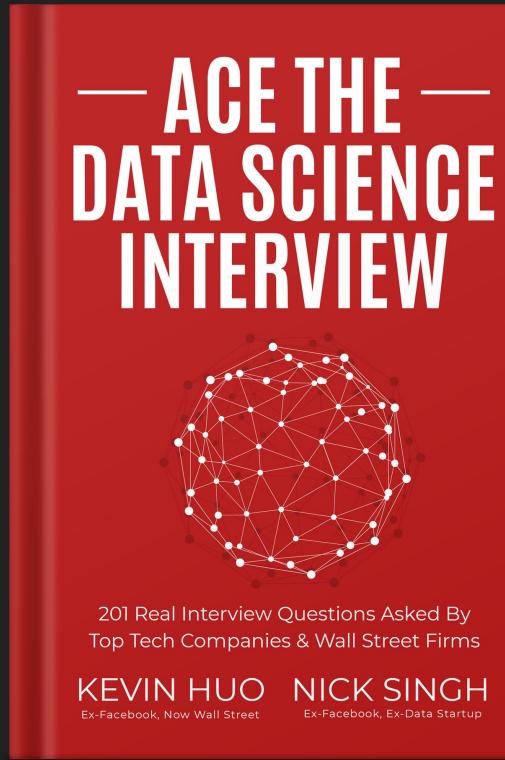
# Grade Breakdown

- **Homeworks (4—one mostly in-class)**
- **Quizzes (12—every Wednesday/Thursday; drop 2)**
- **Exam 1**
- **Exam 2**
- **Final Project (Report and Presentation—Group Optional)**

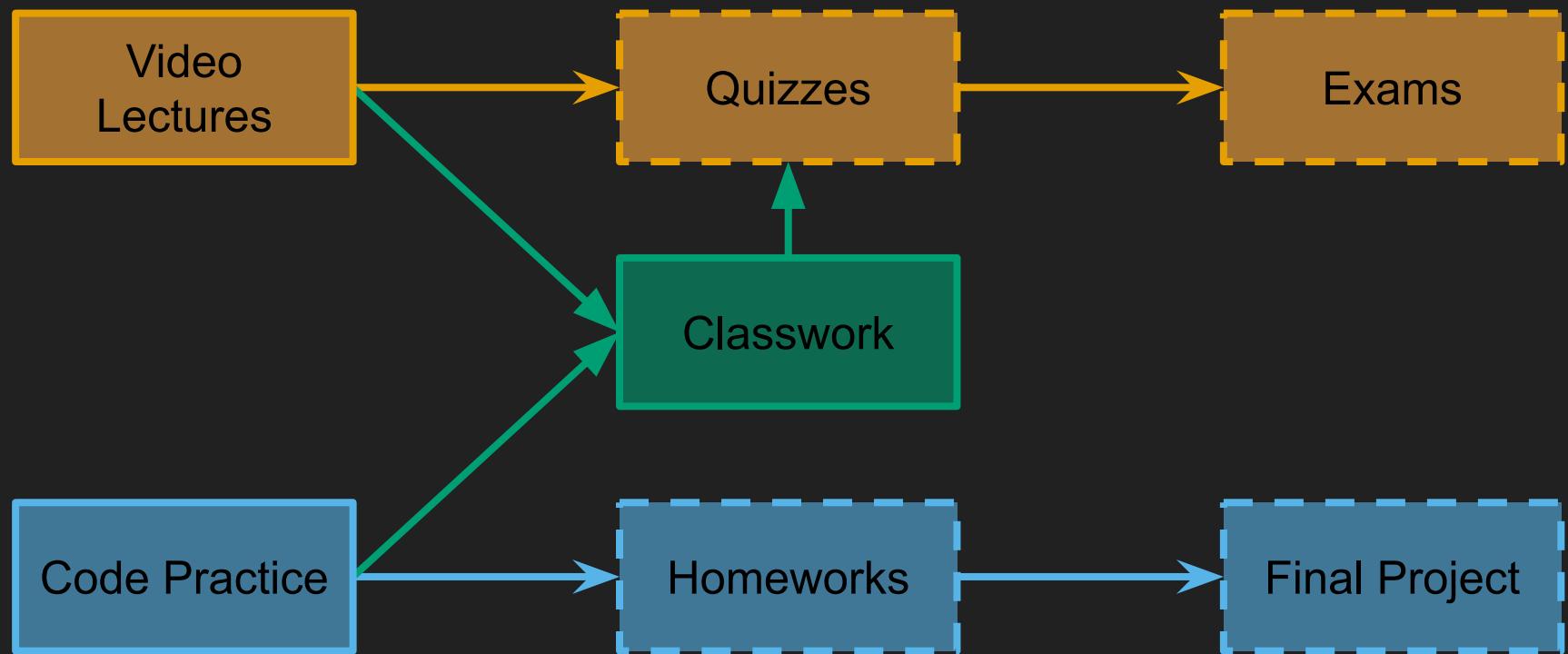
# Quizzes

Paper + Canvas

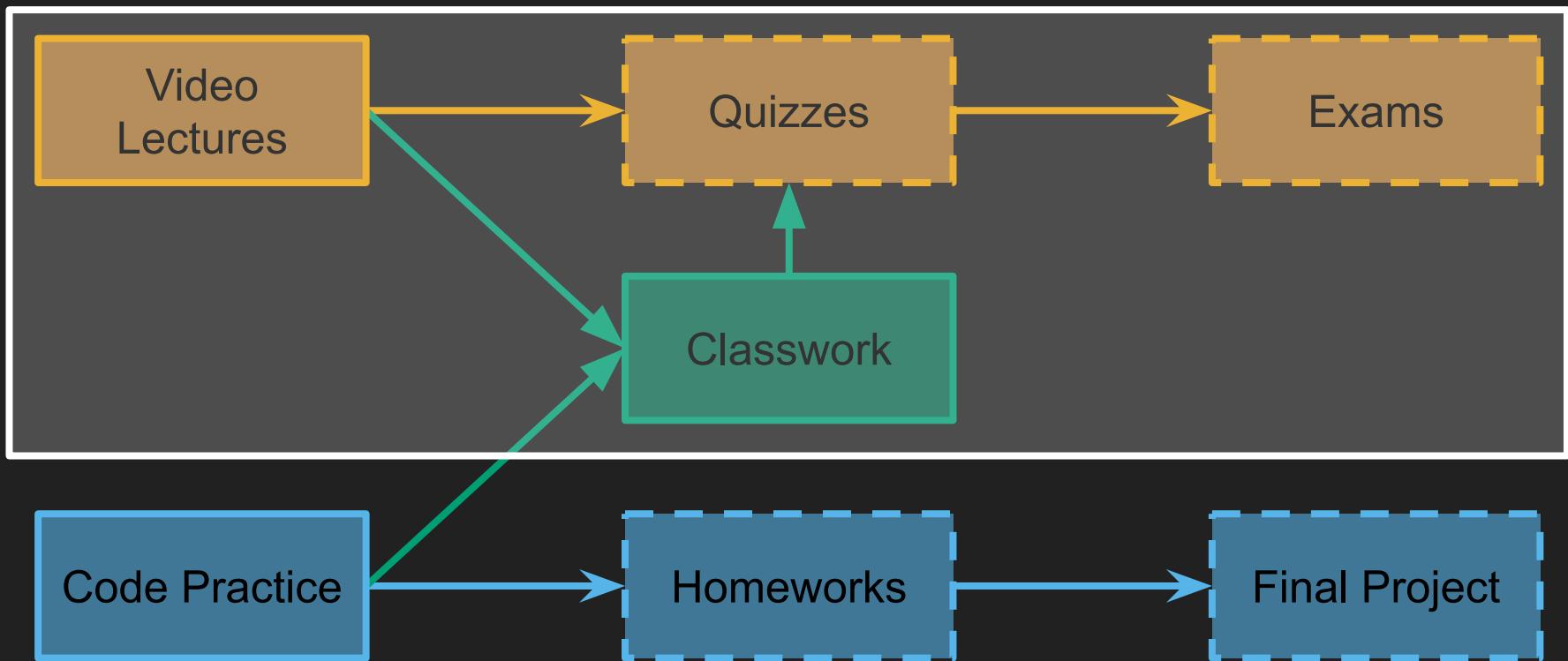
# Changes



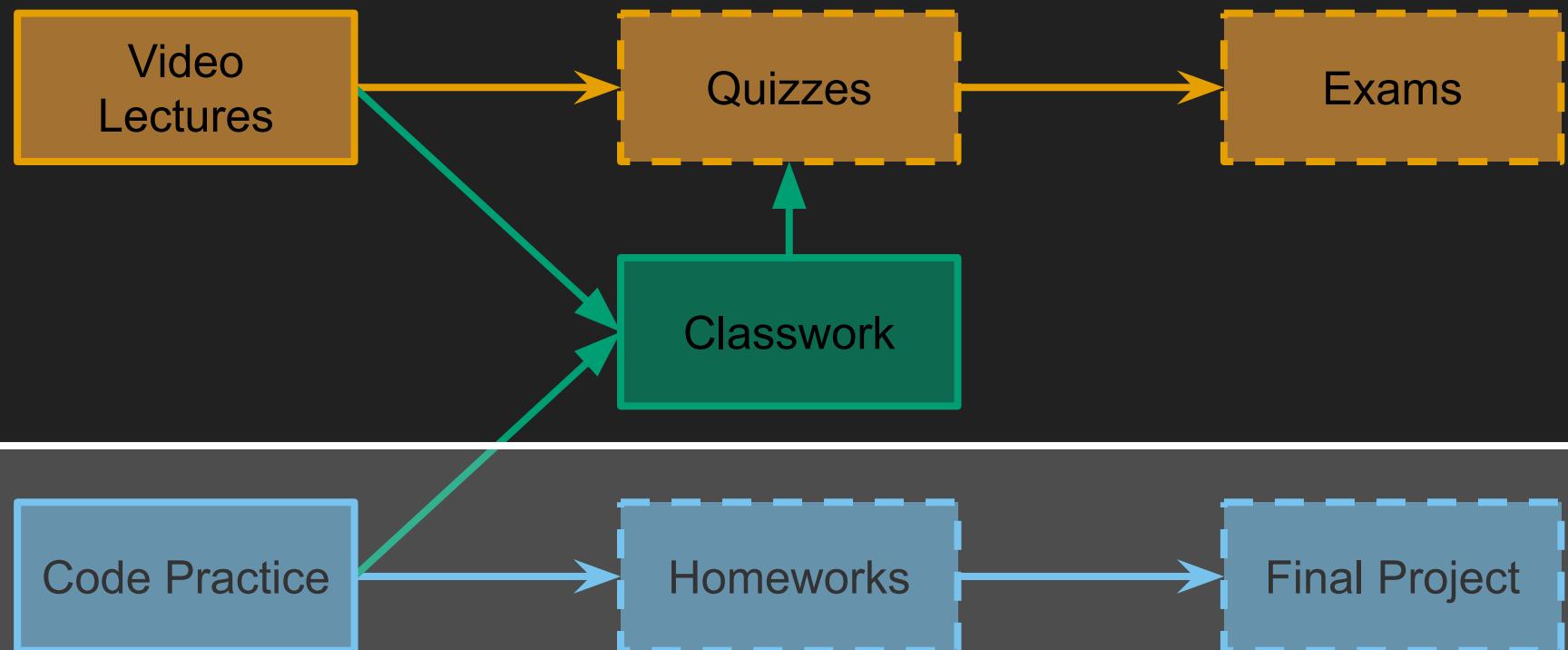
# Outline



# Outline



# Outline

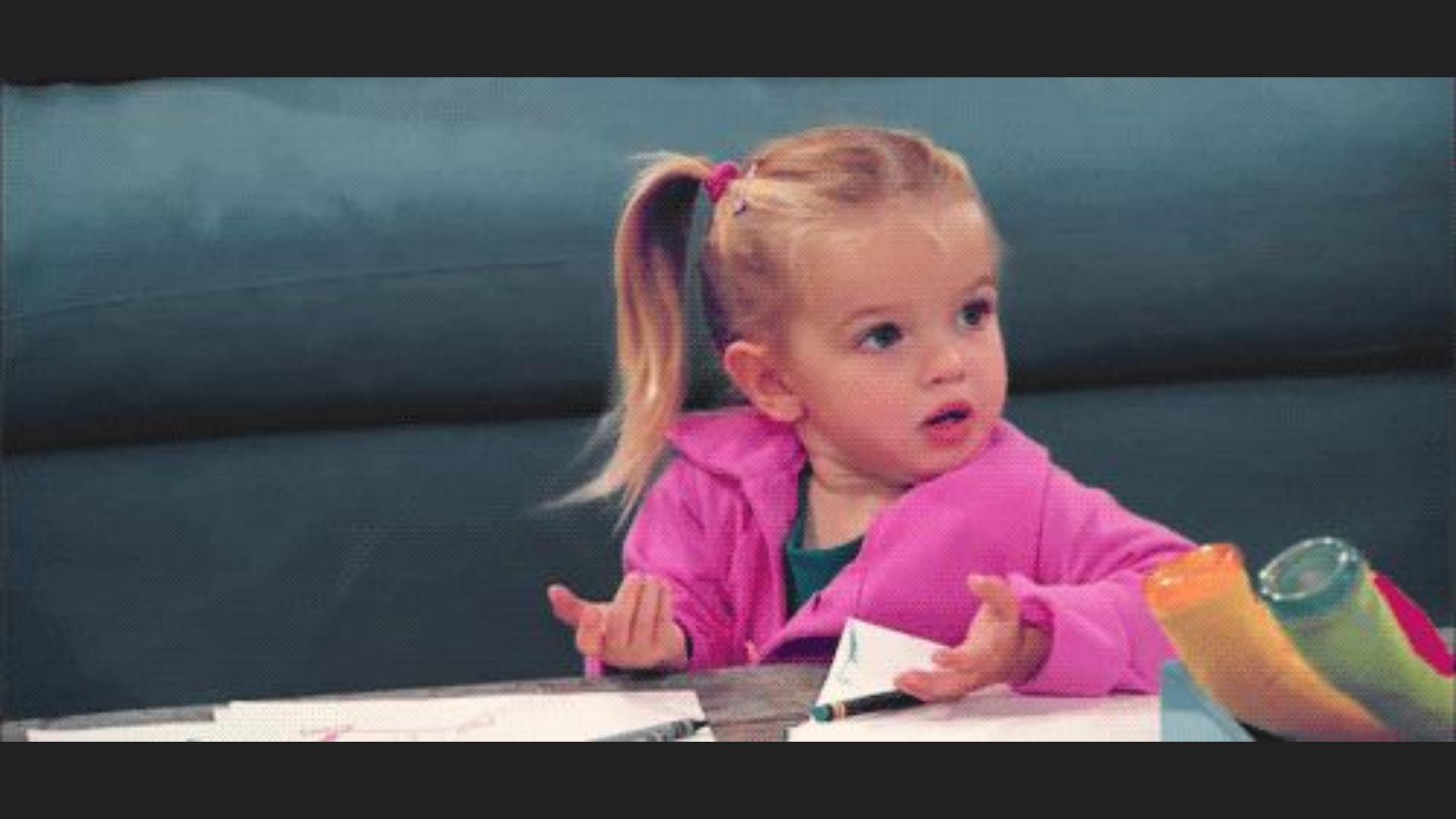


## Late Policies

- **Three 24-hour extensions, no questions asked.**
- You MUST fill out the **Google form** BEFORE the assignment/project is due (+ Add a **Comment** to your Canvas Submission)
- **0.15% per hour (or partial hour) penalty.**

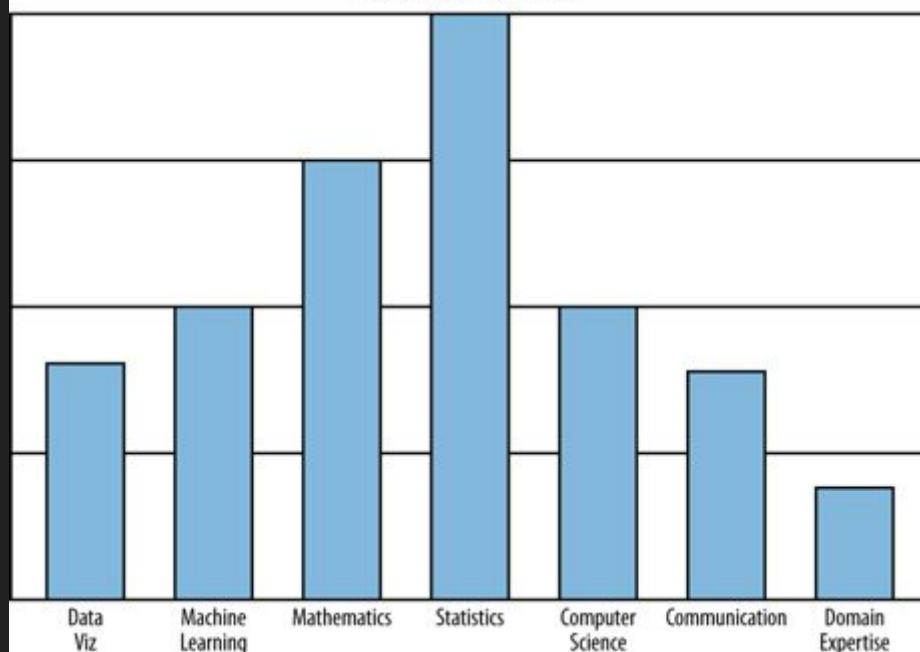
# Questions

# What is Data Science?

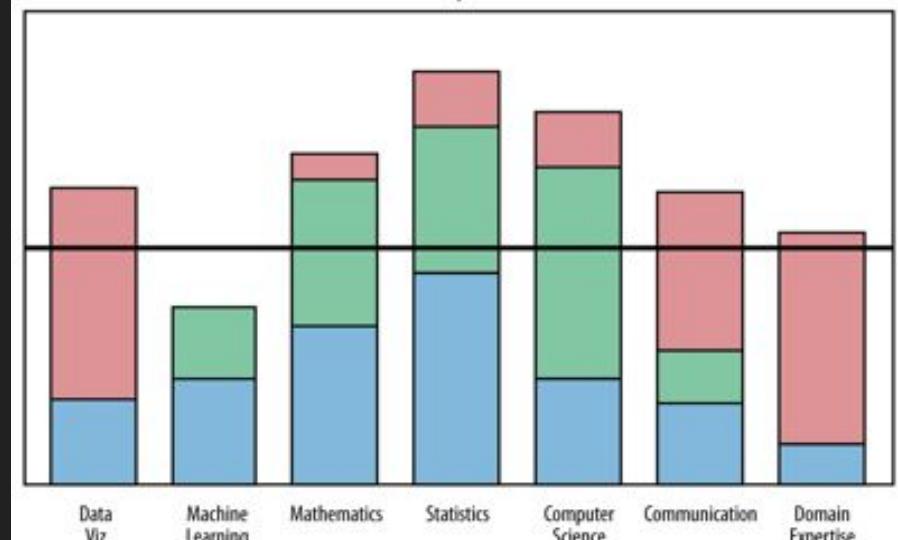
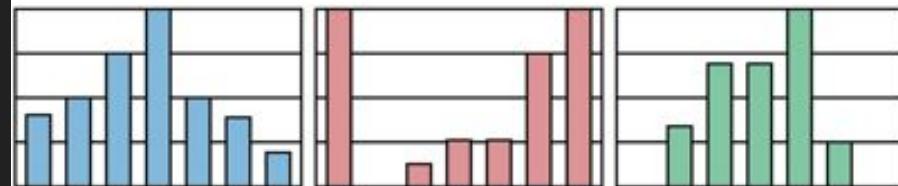


What do you think?

### Data Scientist Profile



No one person can be the perfect data scientist, so we need teams.



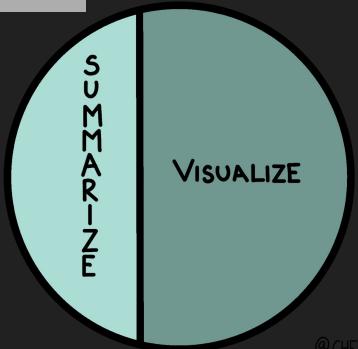
Source: Doing Data Science (O'Neil & Schutt, 2013).

# New York City Subway Diagram



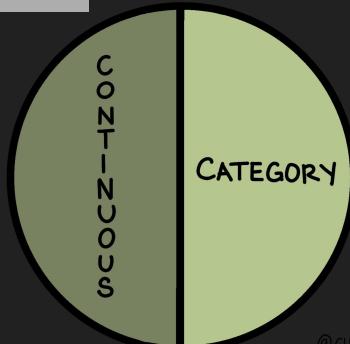
# Algorithms

EXPLORE



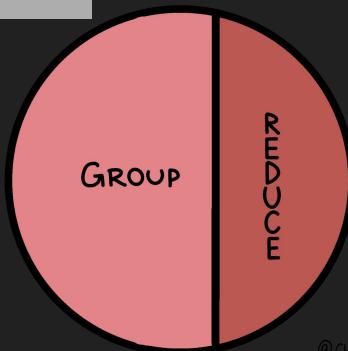
@CHELSEA PARLETT

PREDICT

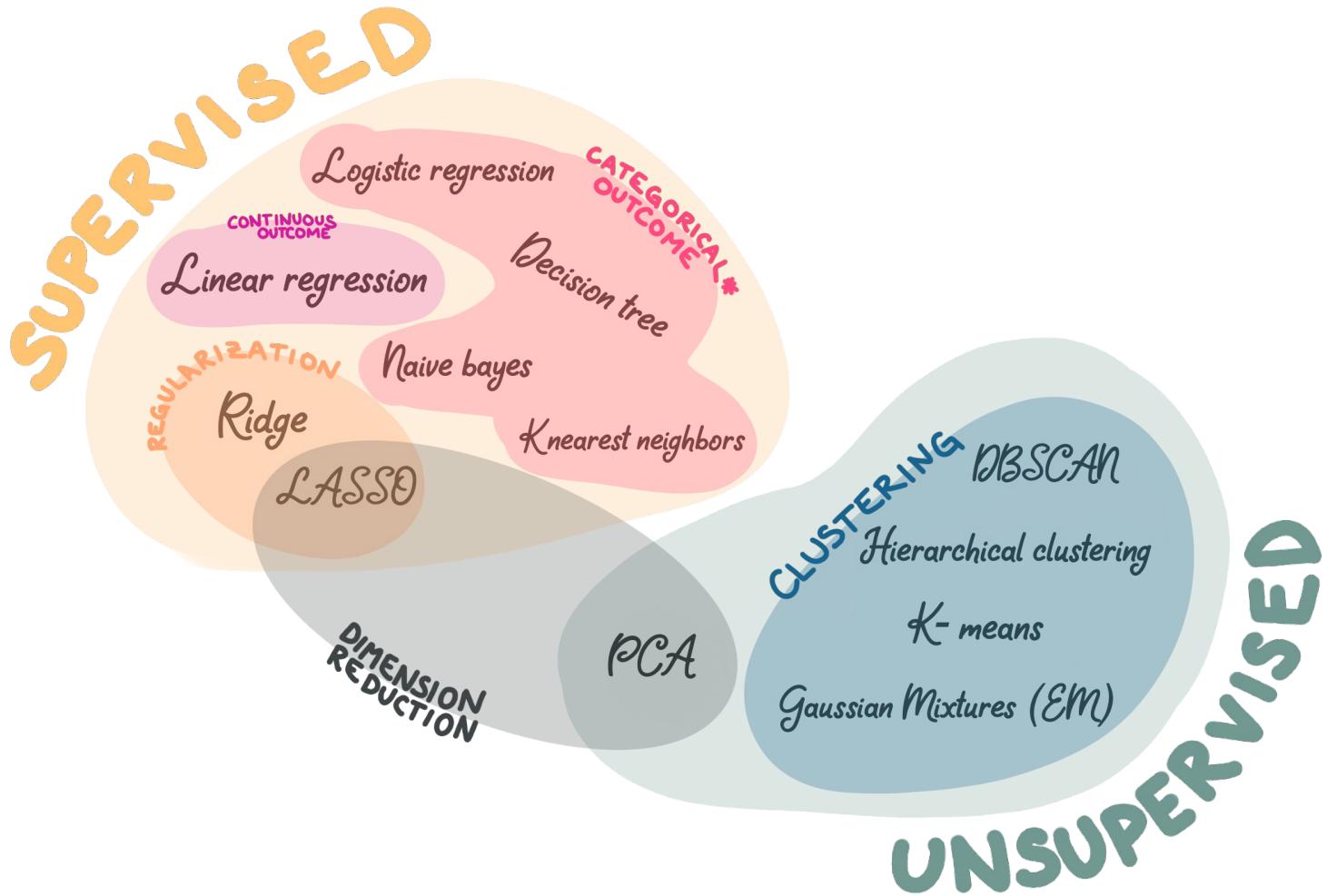


@CHELSEA PARLETT

SIMPLIFY



@CHELSEA PARLETT



# How does Data Science affect the World?

- Ethics
- Communication
- Diversity

# How to Implement Data Science?





Google Colab

colab