

What is AI?



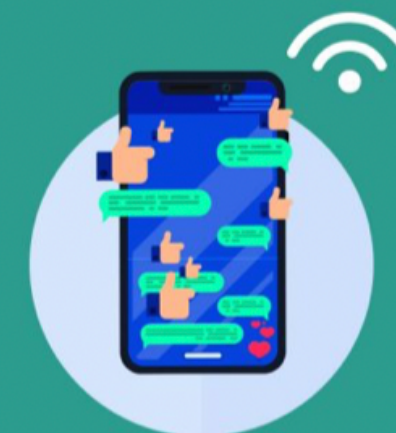
OBJECTIVE

**LEARN HOW TO MAKE
FAIR MACHINE LEARNING
MODELS**

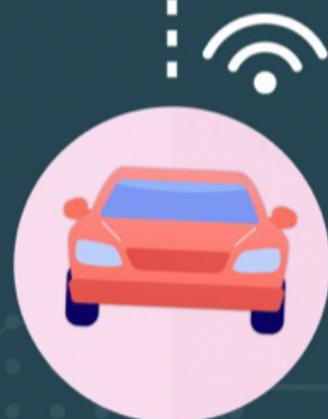
Real Life Examples of AI in Daily Life



Social Media



Chatbots



Smart Cars

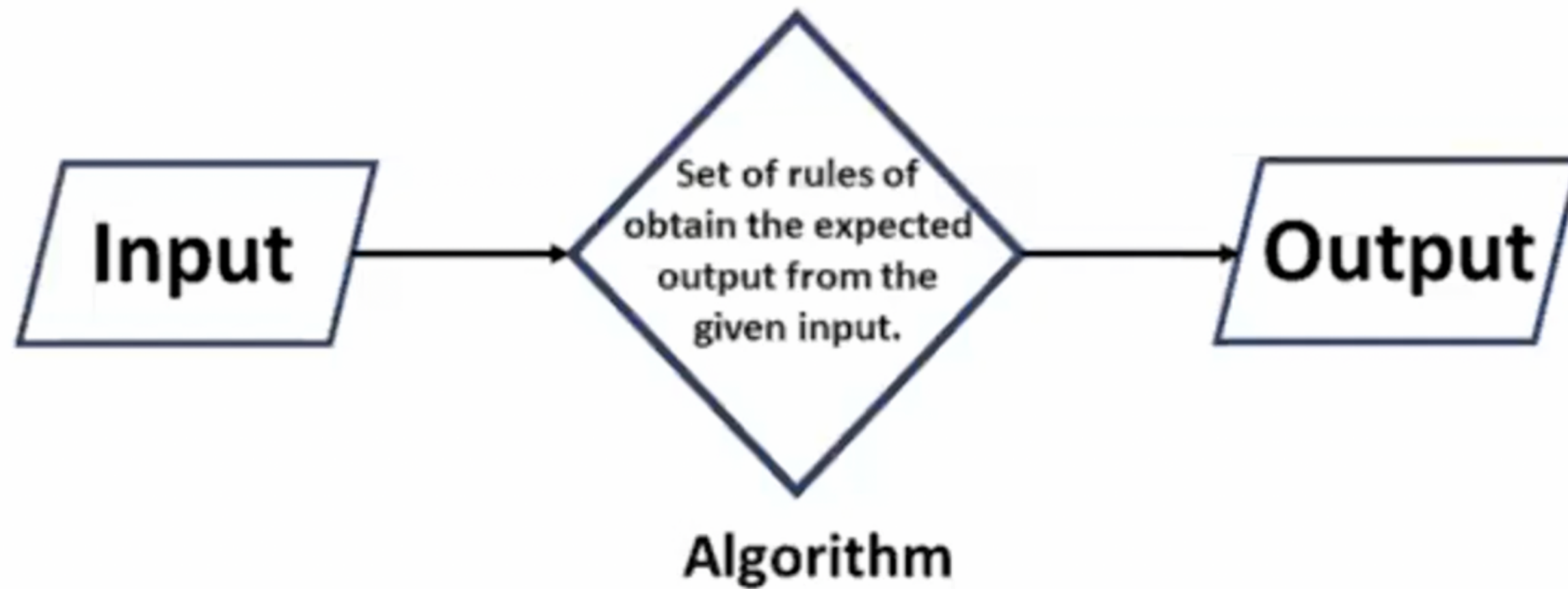


Video Games



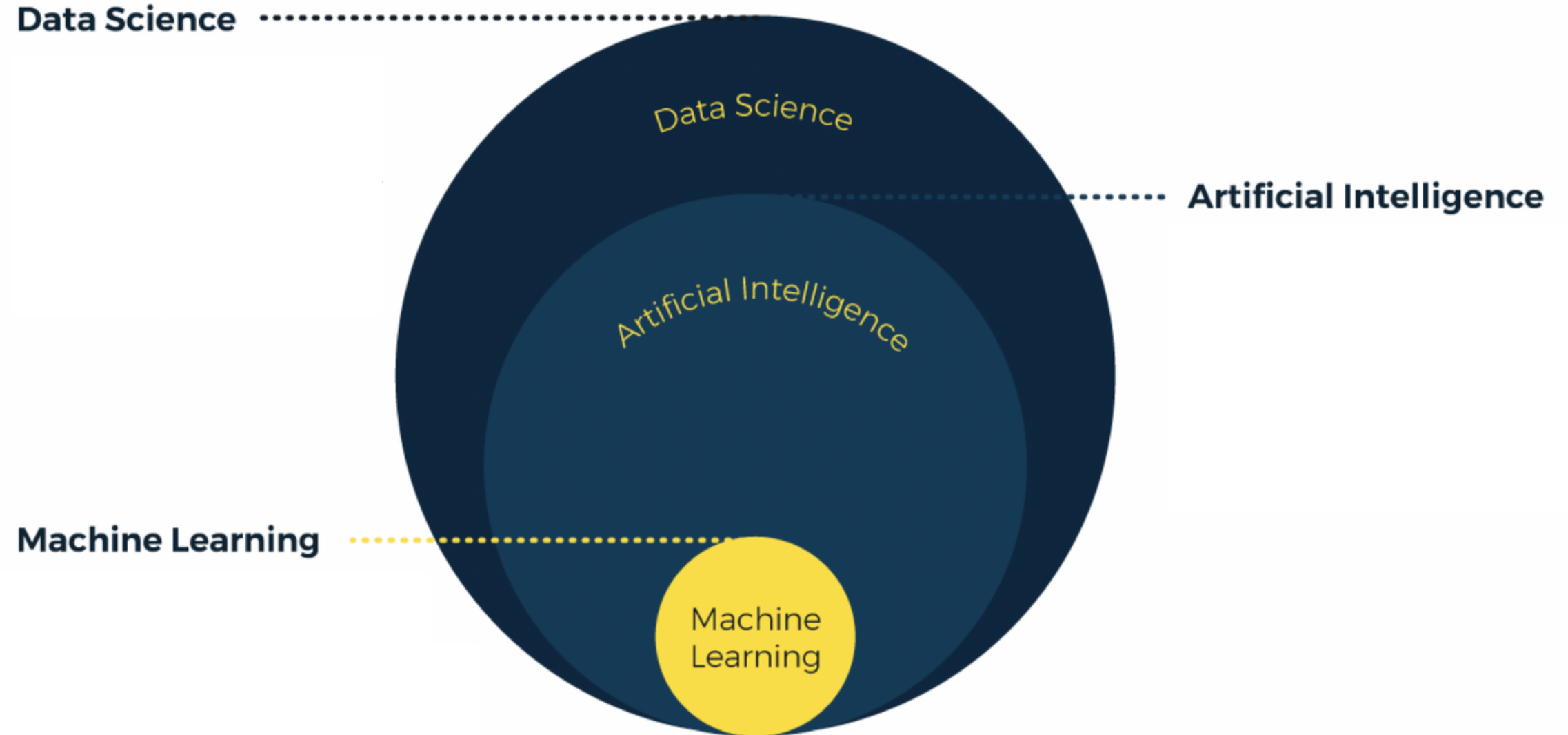
Artificial intelligence is a set of algorithms, that can make decisions with unforeseen circumstances

WHAT IS AN ALGORITHM?



- Machine learning: an algorithm that learns about data and find patterns or insights

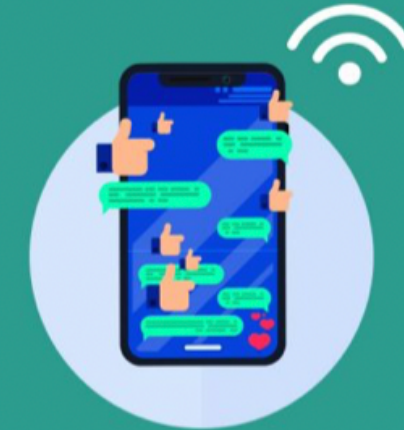
AI vs. Data Science vs. Machine Learning



Real Life Examples of AI in Daily Life



Social Media



Chatbots



Smart Cars

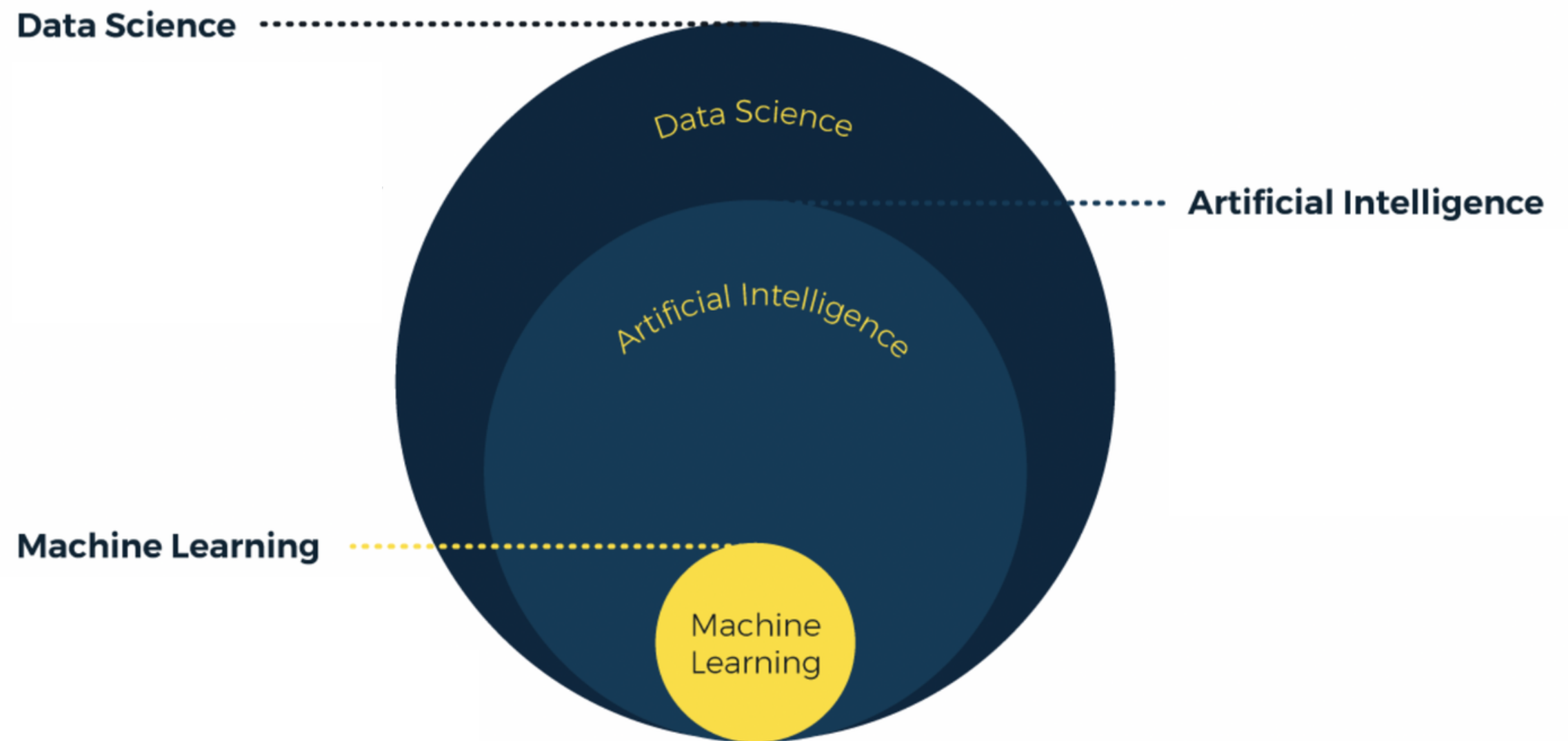


Video Games



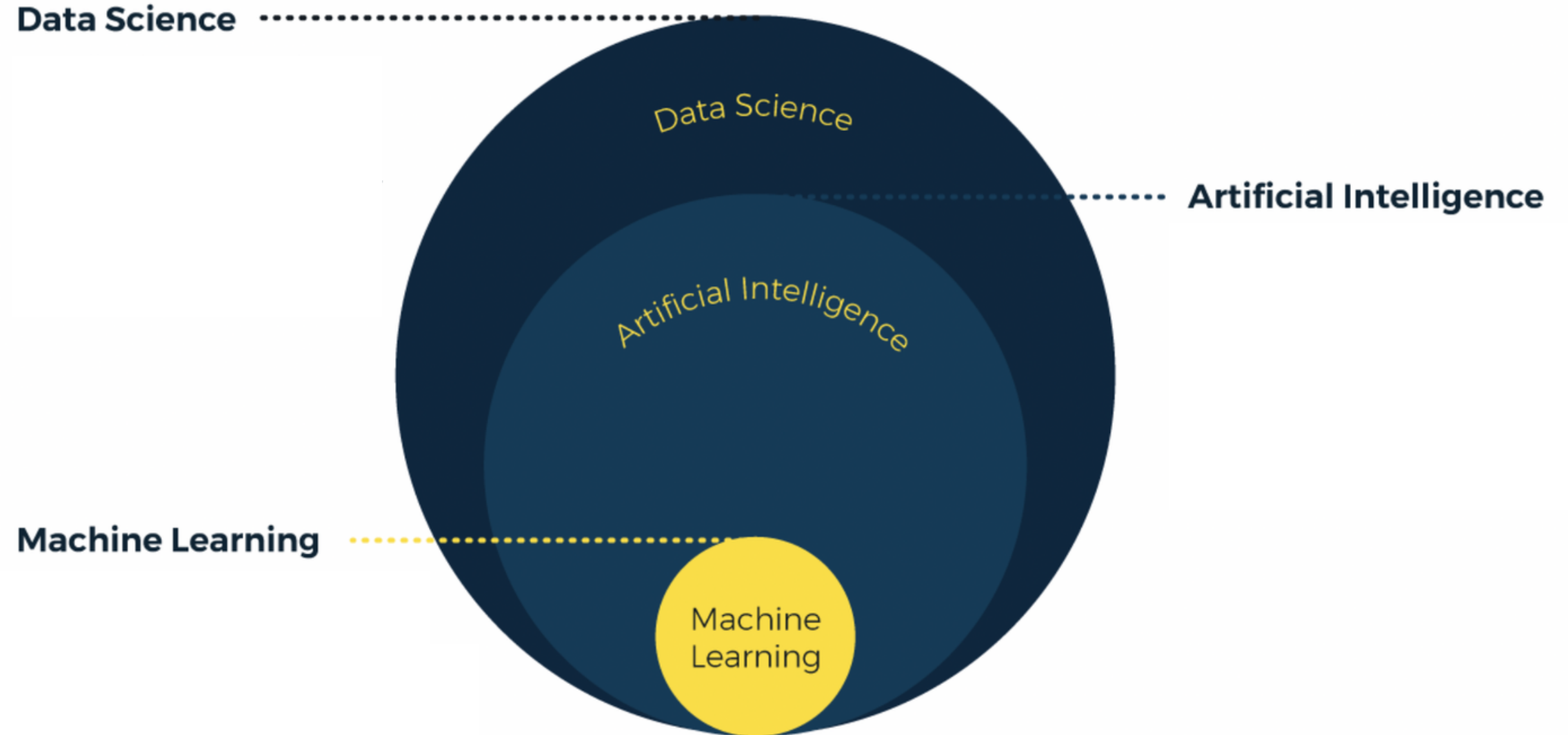
- AI: a set of algorithms that can make predictions through the use of with data

AI vs. Data Science vs. Machine Learning

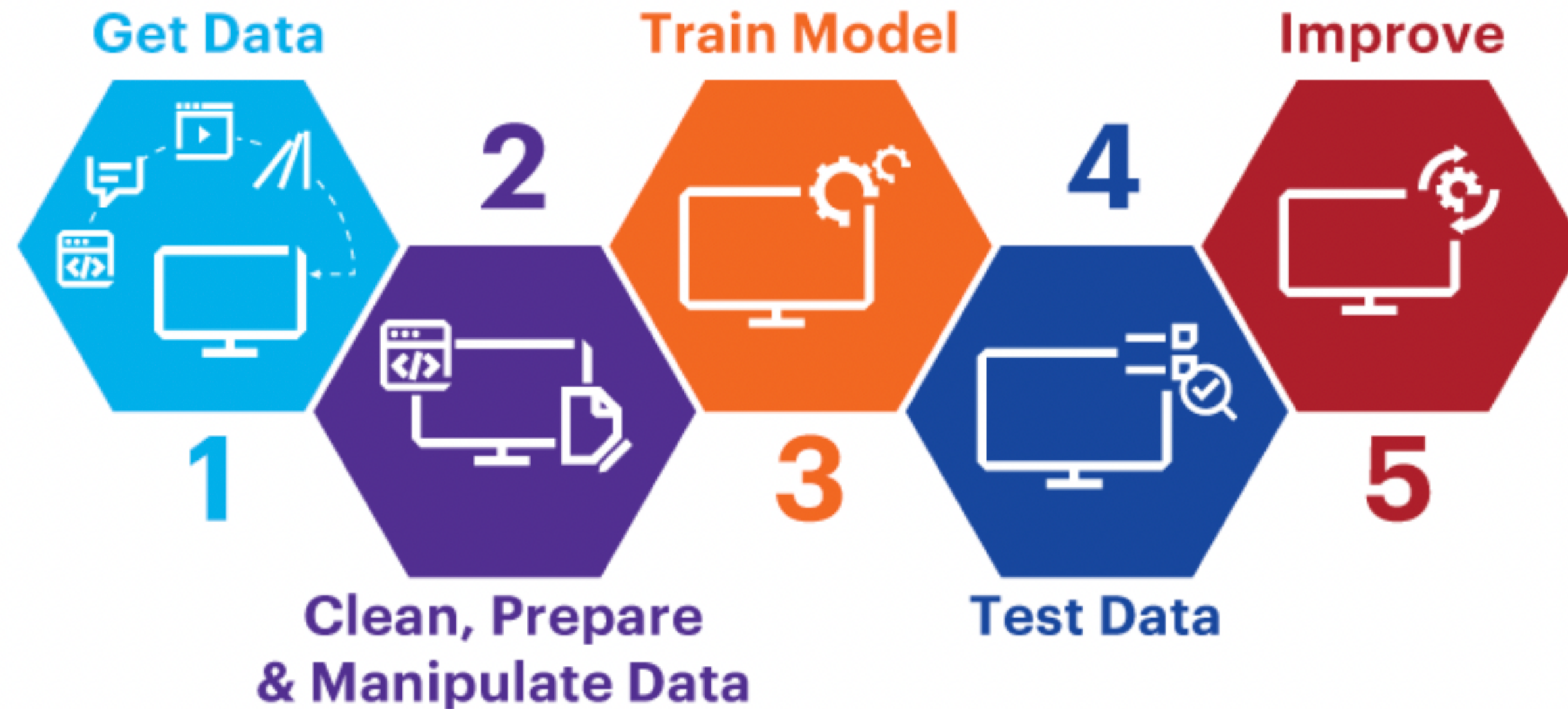


- Data science: the process of analyzing and extracting relevant info from data

AI vs. Data Science vs. Machine Learning



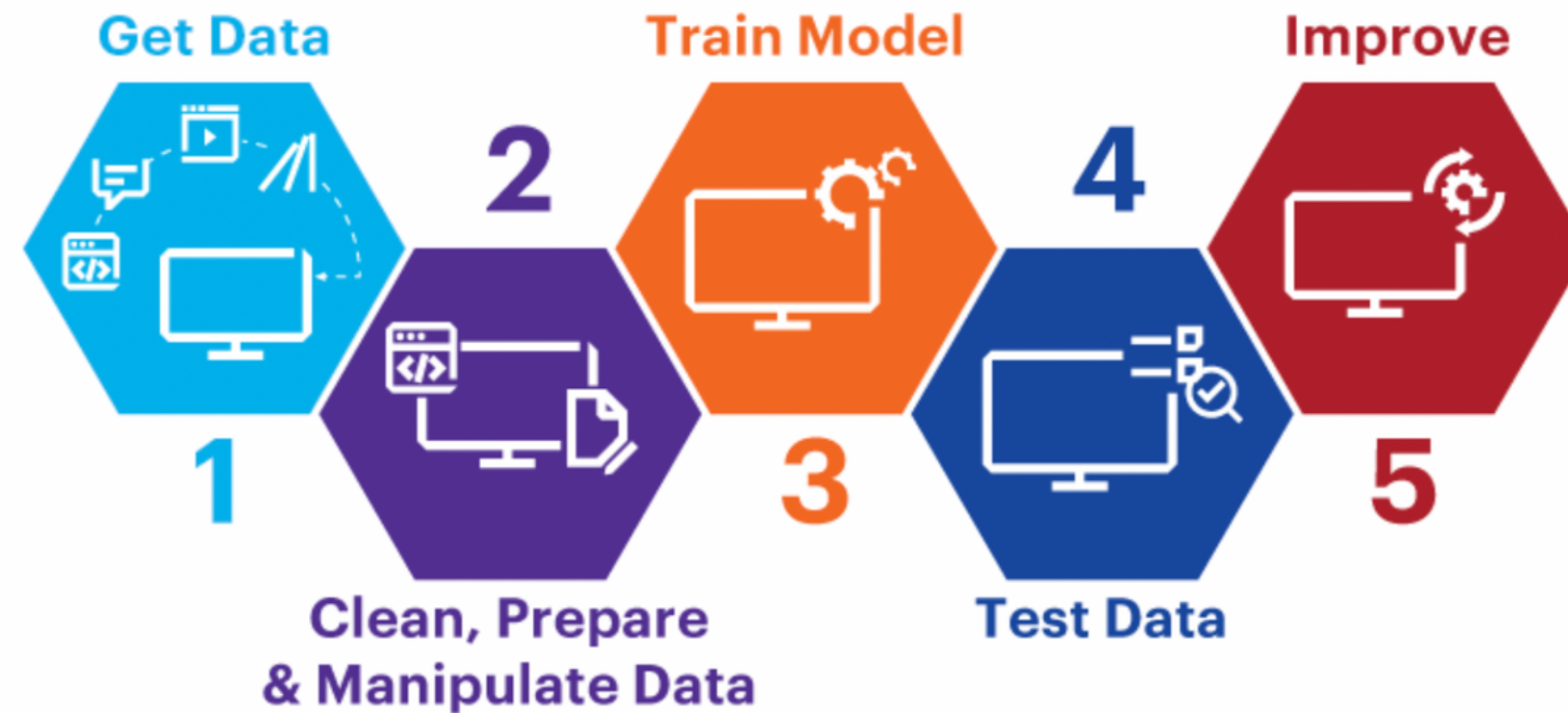
Machine Learning Process



1. Get data:

a. The first step in the Machine Learning process is getting data

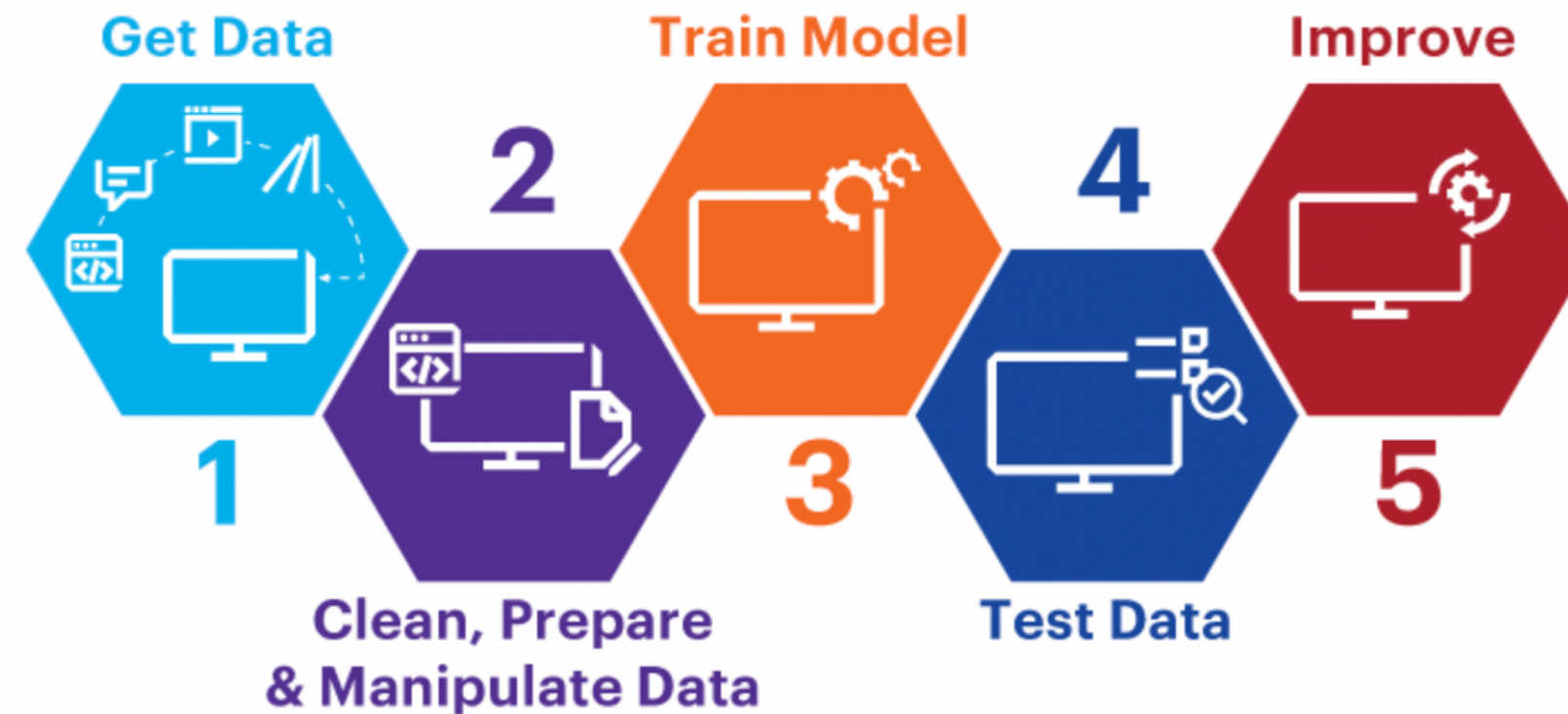
Machine Learning Process



2. Clean, Prepare & Manipulate Data

- a. Real-world data often has unorganized, missing, or noisy elements
- b. Having a clean data set helps with your model's accuracy

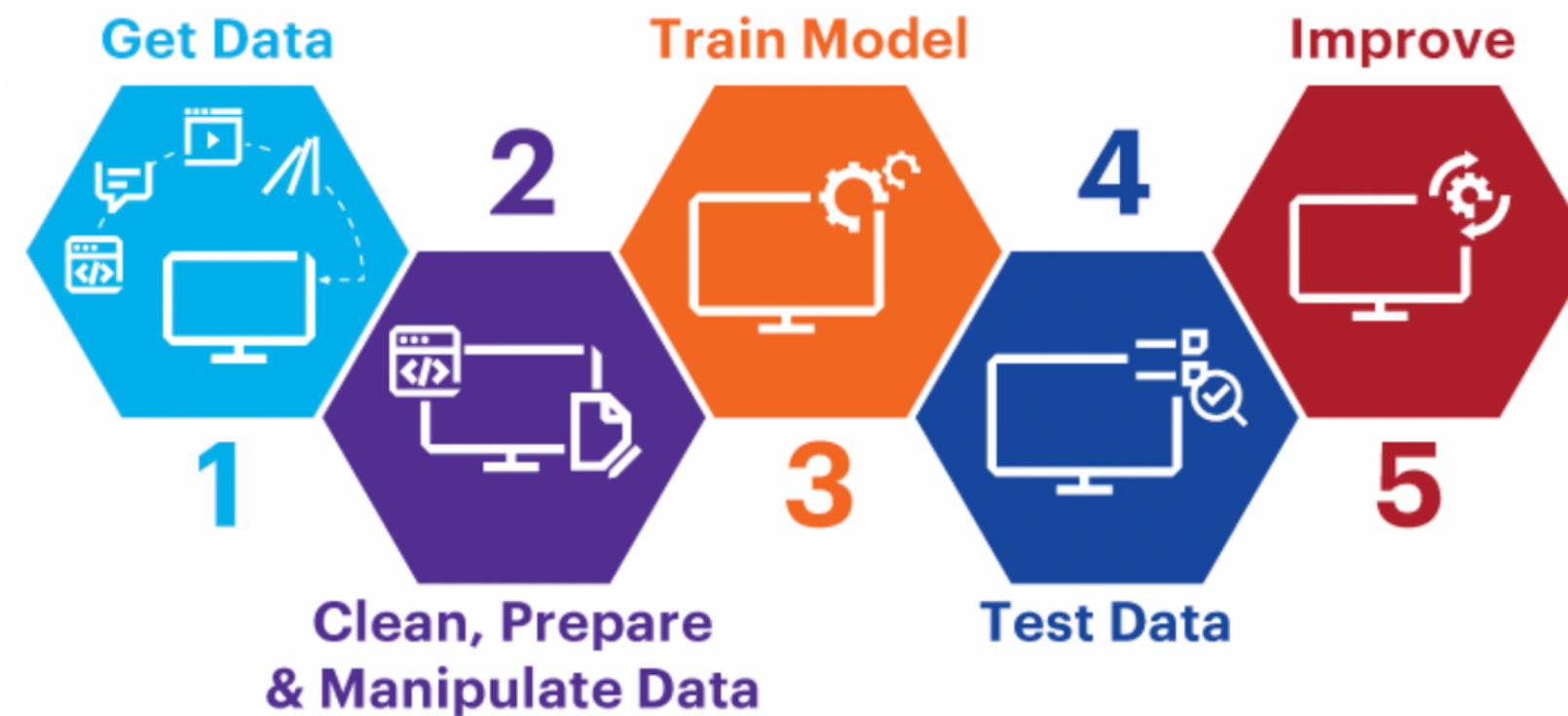
Machine Learning Process



3. Train Model

- a. An algorithm uses math to learn patterns in the data and develop predictions
 - i. Classification: used to categorize an input into many categories

Machine Learning Process



4. Test Data

- a. Check if your model's predictions were correct
 - i. If the results are not satisfactory, you need to improve and retrain your ML model which is step 5

HOW DOES LASER/ANY AI WORK?

- **AI WAS CREATED TO MIMIC HOW HUMANS MAKE DECISIONS**
- **DEFINITION: AI IS A MACHINE THAT CAN MAKE DECISIONS BASED ON PATTERNS IN THE DATA**
- **FOR EXAMPLE, EVEN IF YOU'VE NEVER SEEN A TIBETAN MASTIFF, YOU WOULD KNOW IT'S A DOG BASED ON PATTERNS OF FEATURES THAT YOU KNOW ARE SIMILAR IN ALL DOGS (TAIL, FUR, FOUR PAWS, ETC.)**



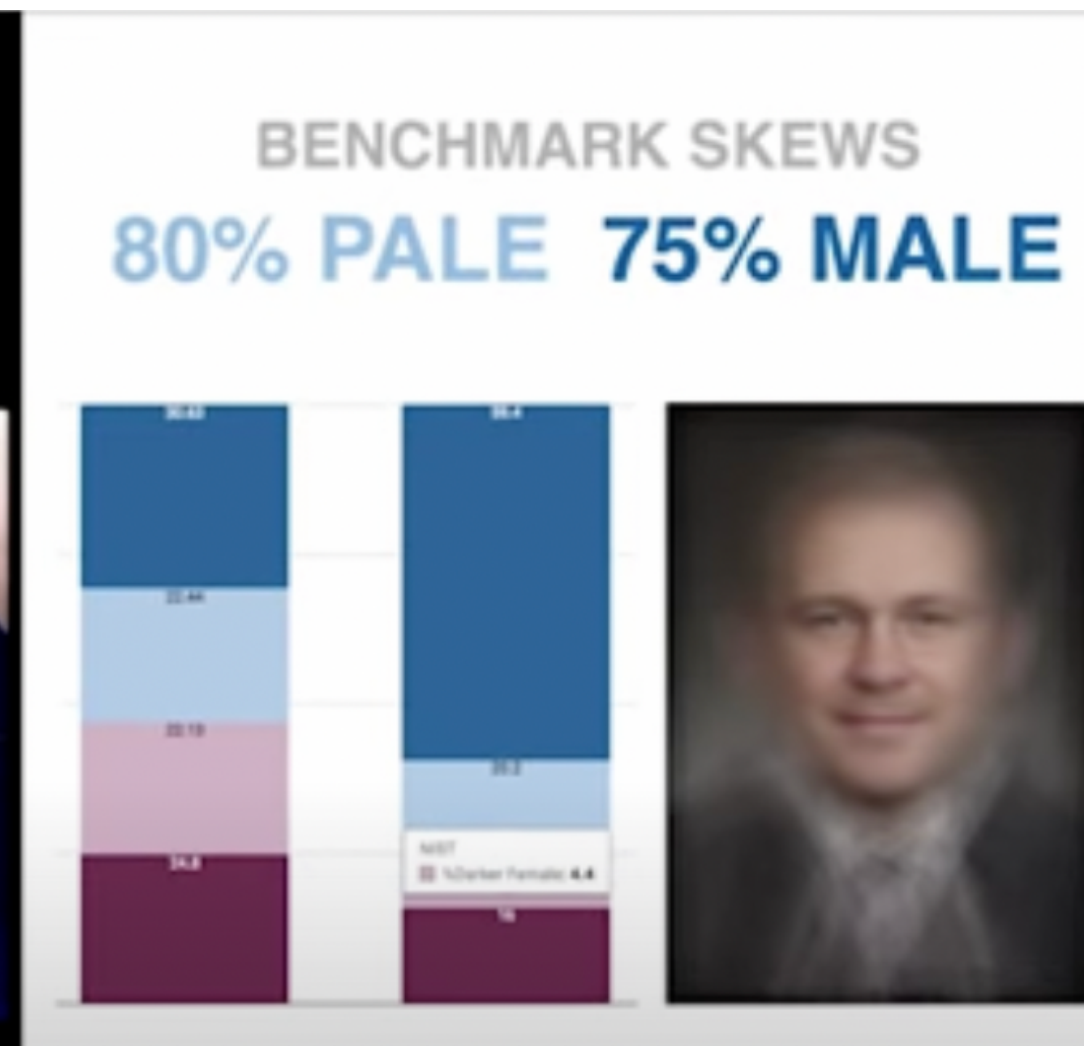
Class Imbalance

- Dr. Buolamwini proved the data sets that the some facial recognition software was trained on consisted mostly of White males. As a result, some algorithms could not recognize darker skinned women.

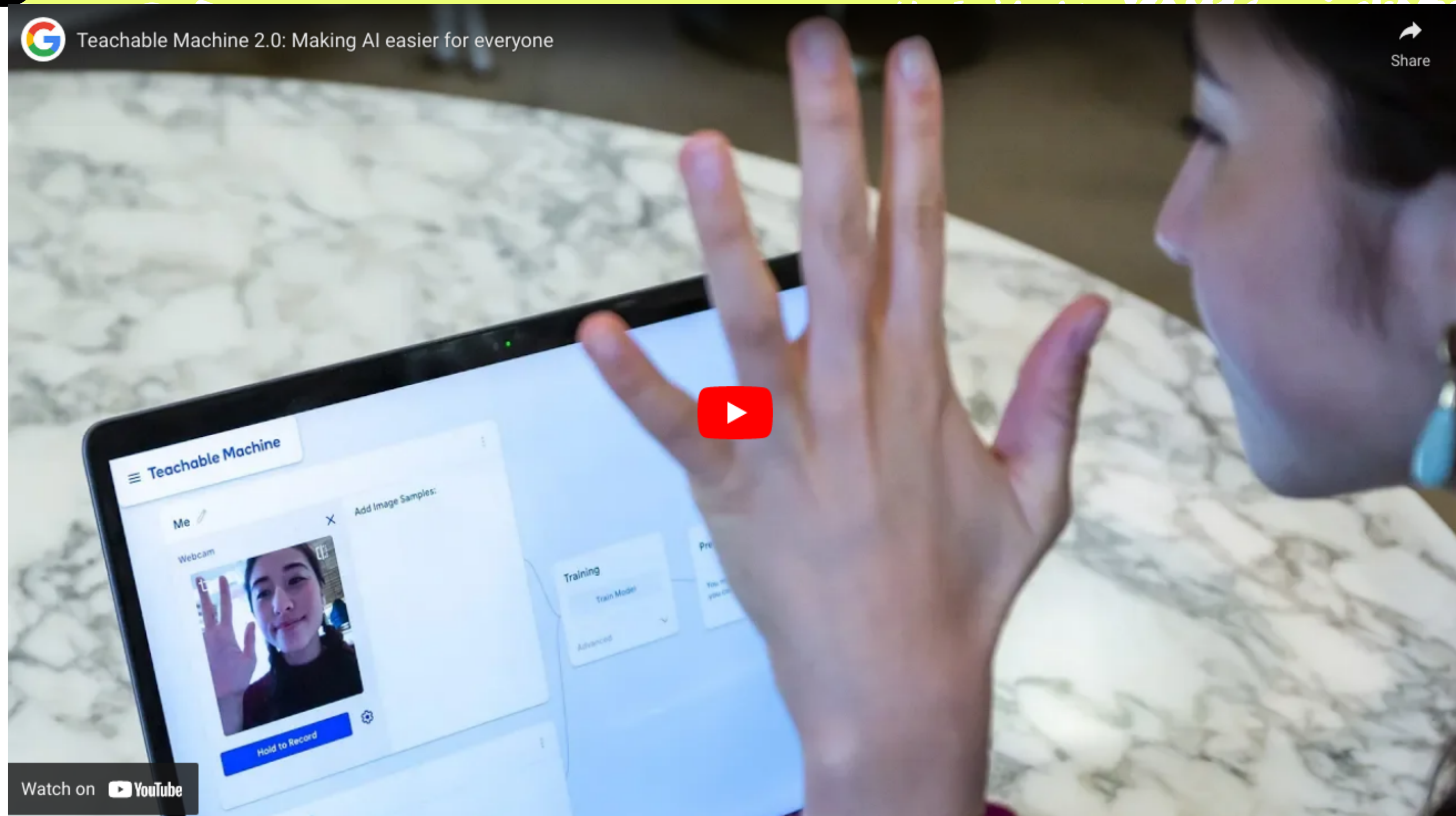


Class Imbalance

- Class = categories you want the computer to learn
- Class imbalance occurs when the training data is not evenly distributed between classes, which can lead to biased machine learning models

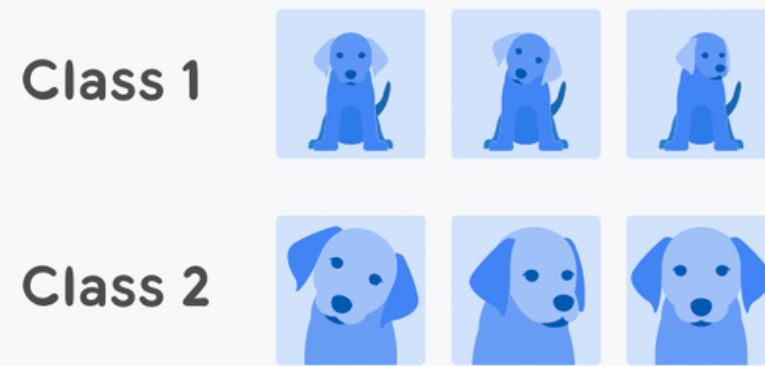


Teachable Machine: Make your own ML model



Teachable Machine

How do I use it?



1 Gather

Gather and group your examples into classes, or categories, that you want the computer to learn.

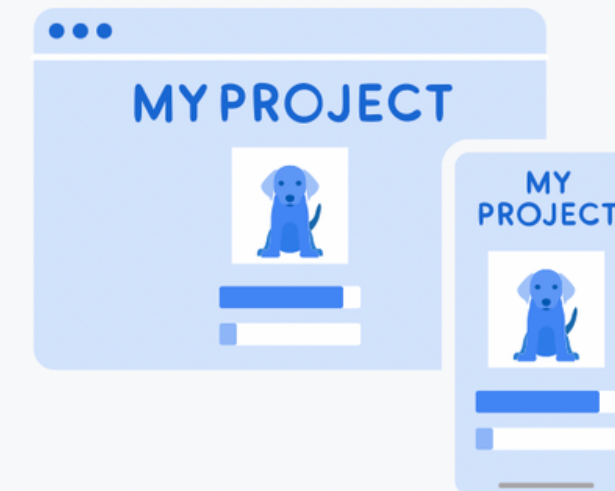
[Video: Gather samples](#) ▶



2 Train

Train your model, then instantly test it out to see whether it can correctly classify new examples.

[Video: Train your model](#) ▶



3 Export

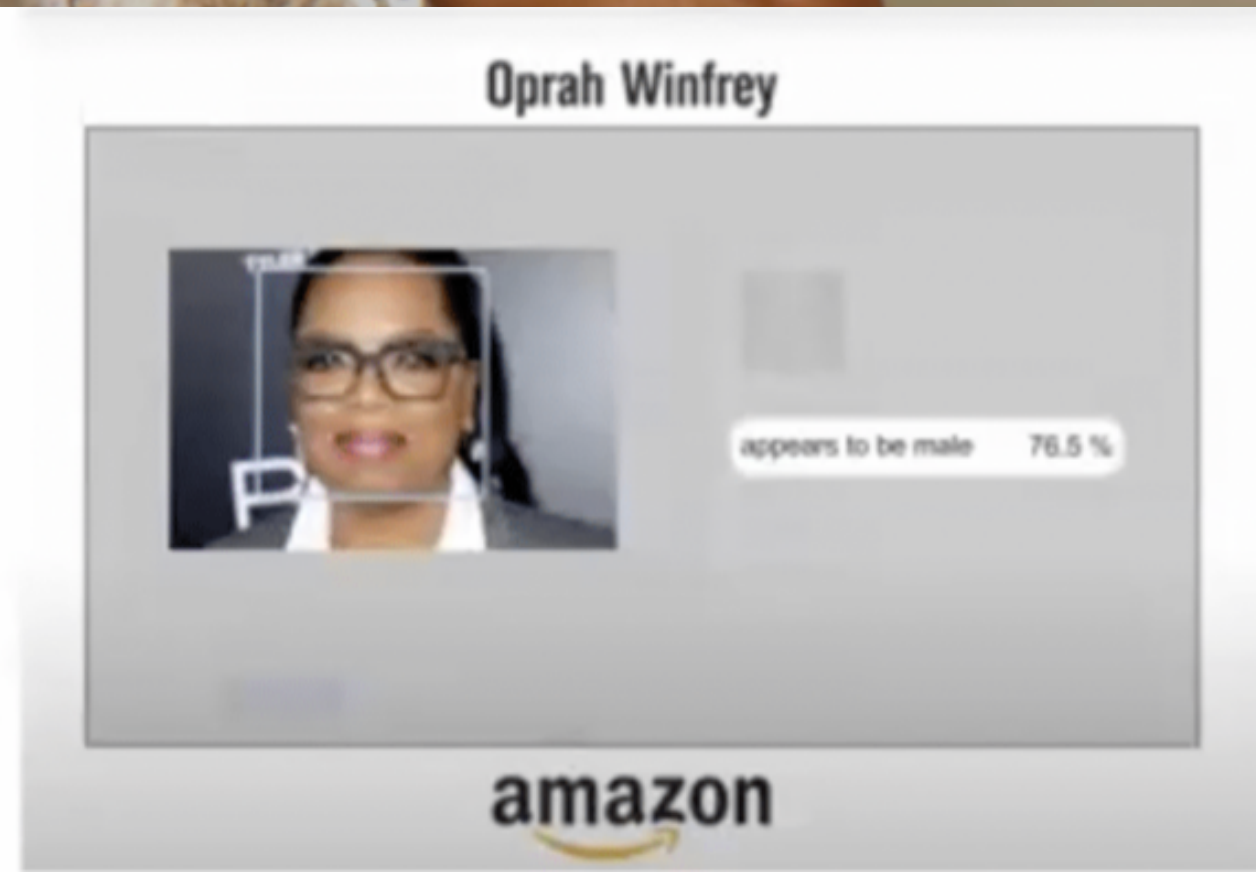
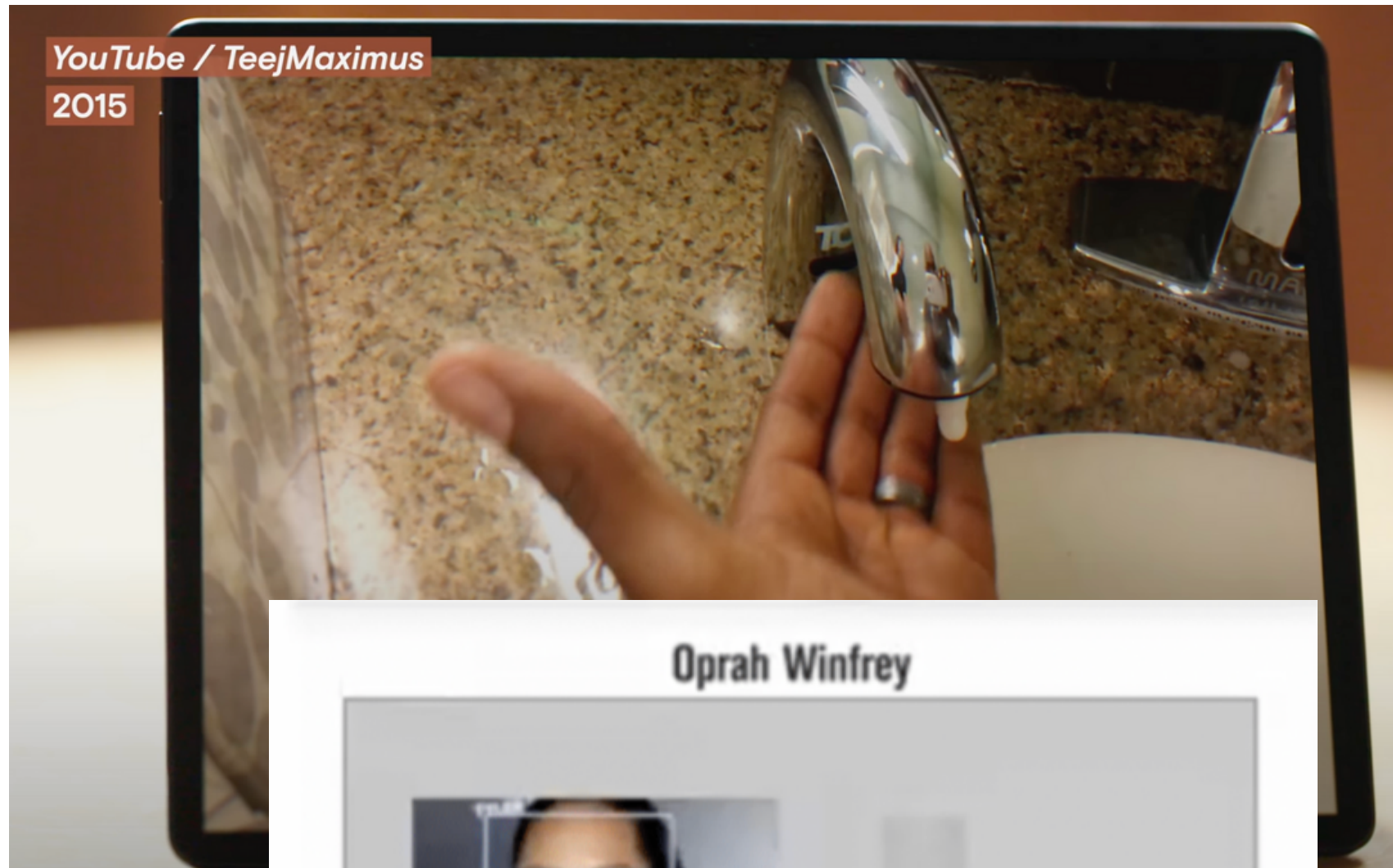
Export your model for your projects: sites, apps, and more. You can download your model or host it online.

[Video: Export your model](#) ▶

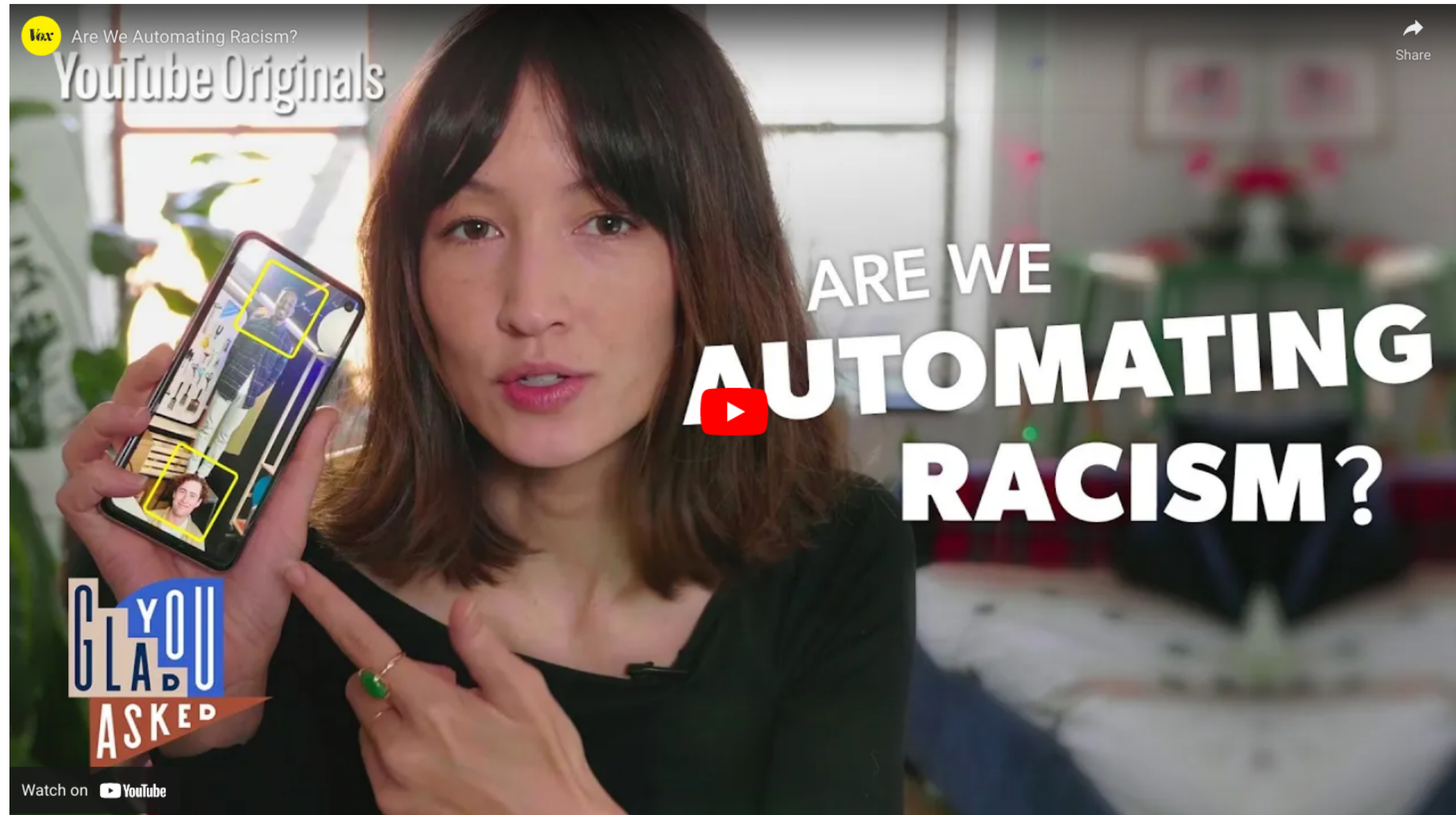
Teachable Machine

- 1. Create a class that is called "Smile" and a class called "Sad"**
- 2. For the happy class, only include 2 images of you smiling**
- 3. For the sad class, include 40 images of you smiling**

Is AI amplifying racism?



Are we automating racism?



Why can't AI recognize African American women?

1. The data used to train the AI is bias
2. Lack of diversity in who is creating AI



HOW MACHINE LEARNING WORKS



HOW MACHINE LEARNING WORKS

**Police Brutality
Lynching
#SayHerName**



Lack of diversity in AI

Meet the remarkable African American Women of @nasa who made John Glenn's inaugural orbit around Earth possible



Oprah Winfrey



appears to be male 76.5 %

Mass incarceration



Bernard Parker, left, was rated high risk; Dylan Puget was rated low risk. (Josh Ritchie for ProP)

Machine Bias

There's software used across the country to predict future criminals. And it's biased against blacks.

