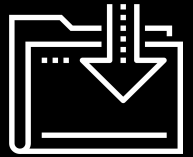




# Algorithmic Bias and Regulations

Data Boot Camp

Module 10 Class 2



# Class Objectives

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By the end of today's class you will be able to:



Explain why algorithmic bias is such a significant concern.



List some common causes of algorithmic bias.



Describe how different rules work together to protect data privacy and security.



Identify the rules that will most likely impact the work that they do or would like to do.

The background is a dark charcoal gray with a series of parallel diagonal lines running from the top-left to the bottom-right. Overlaid on this are several teal-colored geometric shapes: a large central triangle pointing right, a smaller triangle to its left, and a square to its right. Scattered around these shapes are various white line-art symbols, including a plus sign, a minus sign, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, a circle with a cross, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, a circle with a cross, a circle with a dot, a circle with a horizontal line, a circle with a vertical line, a circle with a diagonal line, and a circle with a cross.

**WELCOME**



**How are you feeling about  
your progress so far?**



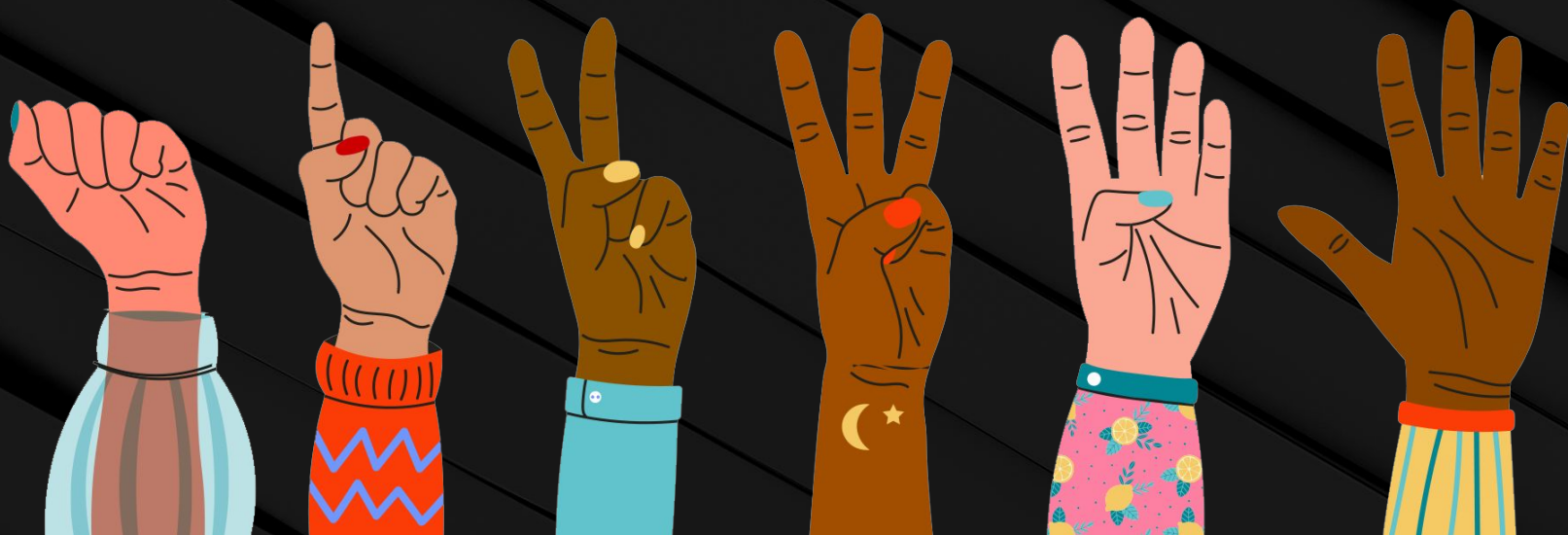
You're starting to  
build your skill set.

It's okay to feel  
overwhelmed,  
but don't give up.

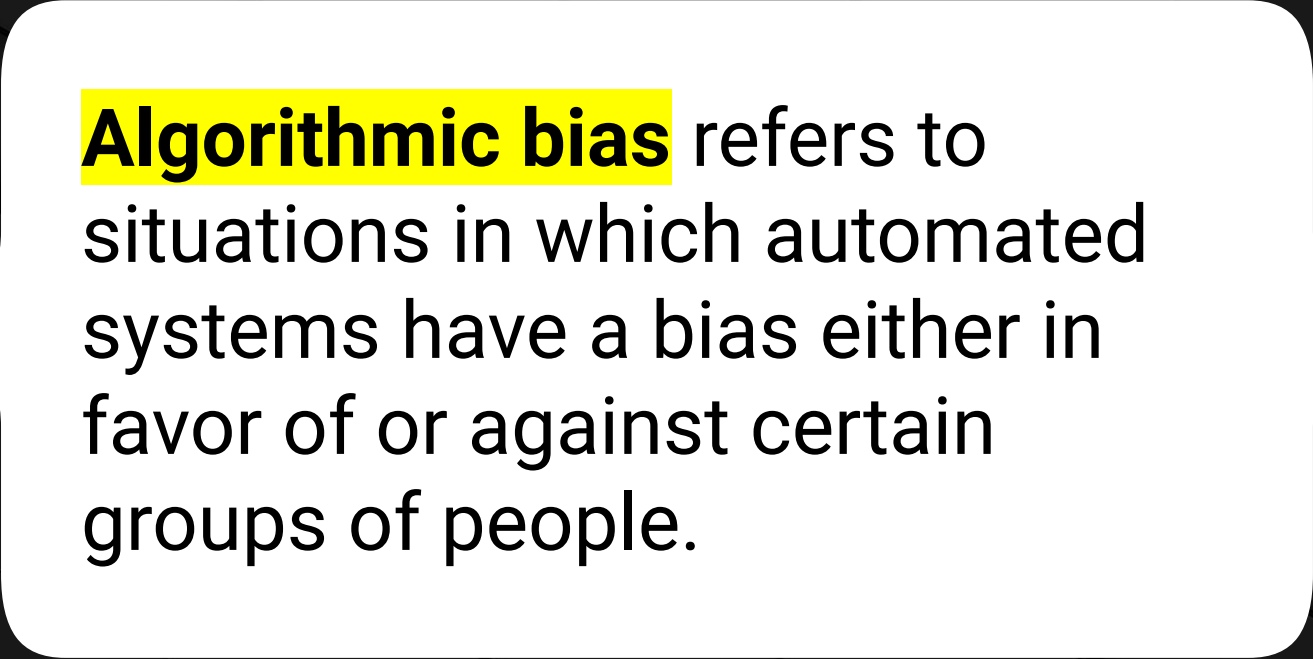
## FIST TO FIVE:

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How comfortable do you feel with this topic?



# Introduction to Algorithmic Bias



**Algorithmic bias** refers to situations in which automated systems have a bias either in favor of or against certain groups of people.



# Example: Algorithmic Bias

TSA's Body Scanners Are Gender Binary. Humans Are Not.



**PROPUBLICA**

TSA's Body Scanners Are Gender Binary. Humans Are Not.

[Newsletters](#) [Search](#)

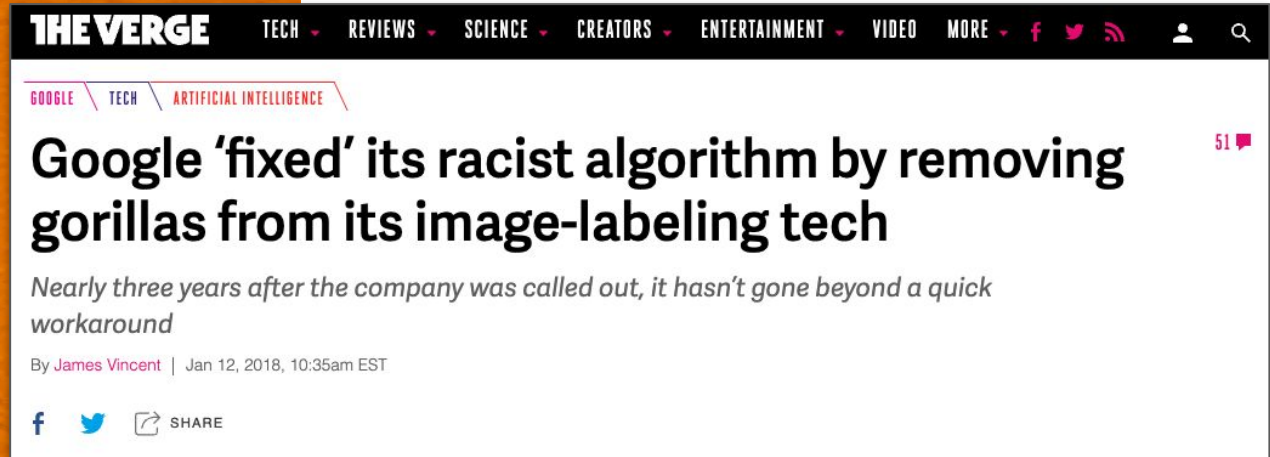
## When Transgender Travelers Walk Into Scanners, Invasive Searches Sometimes Wait on the Other Side

Transgender and gender nonconforming people say they have been pressured to expose their genitals during TSA searches at airports. The encounters stem from shortcomings in the agency's technology and insufficient training of its staff.

by Lucas Waldron and Brenda Medina, Aug. 26, 2019, 5 a.m. EDT

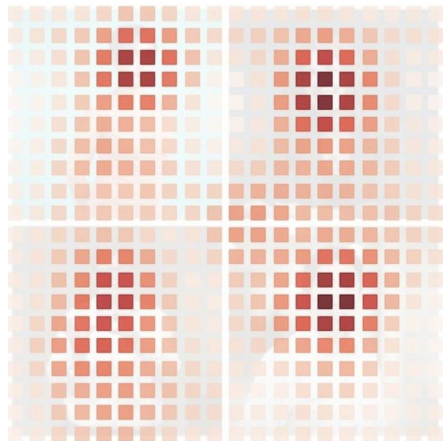
# Example: Algorithmic Bias

Google 'fixed' its racist algorithm by removing gorillas from its image-labeling tech.

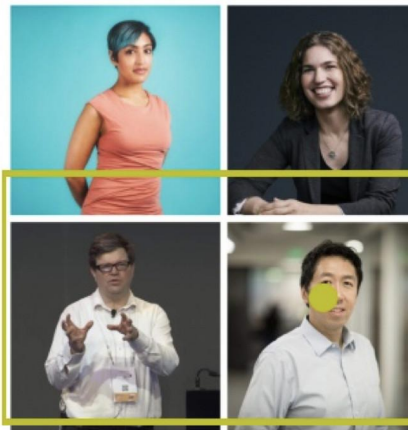


# Example: Algorithmic Bias

Twitter apologises for 'racist' image-cropping algorithm.



Saliency Rank: 1 |  $\alpha=0.56$



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Contribute →

**The Guardian**  
News website of the year

News Opinion Sport Culture Lifestyle

US World Environment Soccer US Politics Business Tech Science Newsletters



**Twitter**  
Twitter apologises for 'racist' image-cropping algorithm

Users highlight examples of feature automatically focusing on white faces over black ones

**Alex Hern**  
@alexhern  
Mon 21 Sep 2020 07:45 EDT

f t e



Learning about examples of algorithmic bias can help us identify situations in which algorithmic bias might happen.



# Algorithmic Bias

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The more that we know about these situations, the more we can do two things.

01

Notice common factors that cause these issues.

02

Continue to follow up on these stories to find out how companies worked to correct the bias that they found.

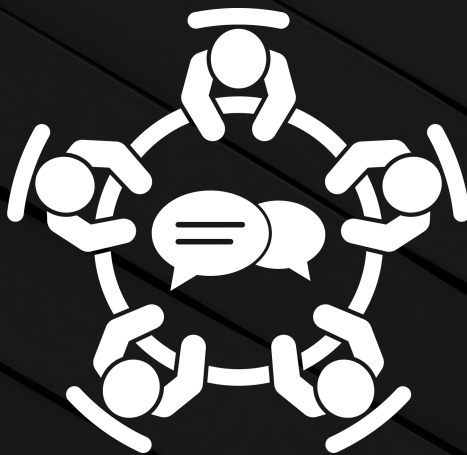


## Activity: Healthcare Bias

In this activity, you will learn about an instance of algorithmic bias in the healthcare industry. In 2019, researchers found that a widely used algorithm for assessing healthcare needs was racially biased.

Suggested Time:

15 Minutes



# Group Discussion

Suggested Time:

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5 Minutes

# Questions?





# Introduction to Data Regulation

# Introduction to Data Regulation

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Let's discuss rules that have been created to control how organizations use data.



# Questions?





You won't need to know the details  
of **every rule** to avoid legal trouble  
in your job.

# Introduction to Data Regulation

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The main point is to be aware of the **common themes** among these rules:



# Introduction to Data Regulation

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The rules you'll need to follow will vary depending on both the type of work that you do and where you do that work. You'll probably need to research some of these rules in your future career to make sure that you're compliant.



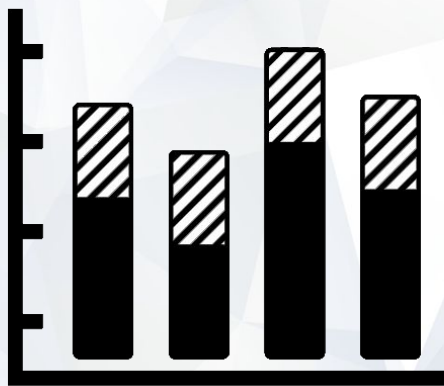


## Activity: Regulation Deep Dive

In this activity, you will choose one rule covered in Lesson 10.5, learn more about that rule, and search online for situations in which companies have gotten in trouble for violating the rule.

Suggested Time:

15 Minutes



## Vote on the option you want to learn more about.

1. General Data Protection Regulation (GDPR)
2. California Consumer Privacy Act (CCPA)
3. Federal Trade Commission (FTC) Act, Section 5
4. Gramm-Leach-Bliley Act (GLBA)—finance
5. Fair Credit Reporting Act (FCRA)—finance
6. Family Educational Rights and Privacy Act (FERPA)—education
7. Health Insurance Portability and Accountability Act (HIPAA)—healthcare
8. Children’s Online Privacy Protection Act (COPPA)—children
9. Electronic Communications Privacy Act (ECPA)—communications

**Suggested Time:**





Time's Up! Let's Review.

# Questions?





# Recap

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Let's review the skills that we covered today:

**Lesson 10.4**

Algorithmic bias

**Lesson 10.5**

Rules for using data

# Questions?



# Challenge Q and A

*The  
End*