**\* The most up-to-date script is in the notes section for the presentation. This is to ensure that the script is up-to-date with each corresponding slide.**

**Introduction**

Good afternoon, everyone; welcome to our presentation. First, let me start by introducing our group members ( ). Our topic today is Big Data Discrimination. As we know, Big Data is widely used in different fields today. It provides convenience to our lives and brings lucrative profits to businesses. However, algorithms may sometimes be biased and lead to discrimination against certain groups of people.

In this presentation, we will introduce COMPAS, the risk assessment tool used by the U.S justice system, and discuss the ethical, legal, and technical issues associated with it.

**COMPAS**

- COMPAS is a recidivism prediction tool used by U.S courts to assess potential recidivism risk. It has two primary risk models, General Recidivism Risk and Violent Recidivism Risk. And two additional risk models include the Recidivism Risk Screen and the Pretrial Release Risk Scale.

- COMPAS is used by judges in pretrial, parole, and even sentencing decisions.

- The decisions made by juristic system actors are essential to public safety, defendants, and crime victims.

- The most common factors making up these scales are the defendants' age, prior criminal history, and prior arrest history.

**Problems**

- Characteristics such as race and age may lead to decision-making inequalities.

- There was no major difference in the overall recidivism prediction accuracy of COMPAS for white and black defendants; however, black defendants were almost twice as likely to be incorrectly predicted to recidivate than white defendants, and white defendants are more likely to be incorrectly predicted not to re-offend than black defendants.

- Based on the analysis, the algorithms are not superior to human predictions as we thought since human beings made similar decisions as COMPAS.

**Ethical Concerns**

- Absence of transparency: Since it is sensitive government data, the public cannot know what variables are used to make up the risk assessment algorithm. In addition,

- Possibility of biases: Machine learning technology is to learn from the past. Since black people are more likely to have prior beliefs of a criminal record than white people, there’s a probability that the future justice system will still be racist as the current one.

- Unfair discrimination:

…

**Legal Concerns**

…

**Technical Concerns**

…

**Conclusion**

…

Some courts, such as the Wisconsin Supreme Court, have ruled that judges in sentencing can consider COMPAS risk scores. This action does not fail to make us think about where we draw the line on the type of crimes we can pre-emptively punish people. And Could this technology be extended to punish people for more serious potential crimes based purely on the risk they will commit? COMPAS should not be overly relied upon as aid, especially for sentencing some more severe offenses. For instance, theft and murder are not the same magnitude of crime and should not be measured by the same standard.

While COMPAS positively impacts the consideration of misdemeanors, it is questionable whether it can be used on a large scale in all sentences, especially in the face of felonies. At the same time, punishing a defendant based on their potential risk of committing a crime seems to be an effective risk aversion tool, but it is hardly fair and just to the individual. Machines cannot predict the future with 100 percent accuracy, nor can they be given too much power to determine a person's future.

**Script**

Good afternoon, everyone; welcome to our presentation. First, let me start by introducing our group members (Name: ).

Our topic today is Big Data Discrimination. As we know, Big Data is widely used in different fields today. It provides convenience to our lives and brings lucrative profits to businesses. However, algorithms may sometimes be biased and lead to discrimination against certain groups of people. In this presentation, we will introduce COMPAS, the risk assessment tool used by the U.S justice system, and discuss the ethical, legal, and technical issues associated with it.

The first question is, what is discrimination in big data? We can consider it as a continuation of human discriminatory behavior. In data training, algorithms are trained based on the data generated from discriminatory human behavior, and the final models perpetuate this discrimination and unfairly discriminate against individuals, communities, or groups.

Next, let's move on to COMPAS. COMPAS, or "Correctional Offender Management Profiling for Alternative Sanctions (**COMPAS**), is a [case management](https://en.wikipedia.org/wiki/Legal_case_management) and [decision support tool](https://en.wikipedia.org/wiki/Decision_support_software) used by [U.S. courts](https://en.wikipedia.org/wiki/U.S._court) to assess the likelihood of a [defendant](https://en.wikipedia.org/wiki/Defendant) becoming a [recidivist](https://en.wikipedia.org/wiki/Recidivist).**"** It helps juristic system actors to make pretrial release, parole, and even sentencing decisions. COMPAS has two primary risk models, General Recidivism Risk and Violent Recidivism Risk. And two additional risk models include the Recidivism Risk Screen and the Pretrial Release Risk Scale. We can see the general recidivism risk scale used to predict new offenses upon release, which helps to classify reoffending risk and fully assess high-risk cases. And Violent Recidivism Risk Scale is used to predict violent offenses following release, which inform the court to make probation decisions. The scales input a lot of factors, but the most common factors making up them are the defendants' age, prior criminal history, and prior arrest history.

In 2016, a senior reporter from ProPublica, Julia Angwin, and her colleague found that the predictions by COMPAS are racially biased. Based on the analysis, black defendants were almost twice as likely to be incorrectly predicted to re-offend than white defendants, and white defendants are more likely to be incorrectly predict not to re-offend than black defendants. I know this sounds a bit complicated. In short, black defendants are more likely to be classified as a high-risk group and to suffer injustice when the court makes parole or pretrial release decisions.

On an ethical level, we need to think about two questions. Can we justify punishing a person before they have committed a crime? ()

Unfair discrimination:

As we stated earlier, the most common factors that make up the risk assessment scale are the defendant's age, prior criminal history, and prior arrest history. In this case, the algorithm will be significantly biased. Since African Americans typically commit crimes at a higher rate than other races, they will also be more likely to be assessed as high risk by these scales. However, the data demonstrate that black defendants are far less likely to reoffend after release than the algorithm predicts, that they are clearly being treated unfairly, and that it is even more unethical to be sent to prison or released on bail based on race.