DSCI 531: Quiz 1

Make-up quiz

1. Email *

   _____

2. Name

   _____

3. USC ID

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ETHICS AND AI

4. Suppose a machine learning model uses smart watch data to determine where potholes are. However, the only data used is from a high income neighborhood that is predominantly White. Which type of bias does this pipeline most directly display?

   Mark only one oval.

   ( ) Behavioral Bias

   ( ) Sampling Bias

   ( ) Information Leakage

   ( ) Evaluation Metric Bias

5. Suppose you are dealing with a classifier which approves loans in LA. One of the features considered is zip code of current residence. What is one potential risk you could imagine with this feature?

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UNSUPERVISED LEARNING

6. In which of the following situations would you choose to use PCA over t-SNE?

    Mark only one oval.

    ◯ Your dataset has extreme outliers

    ◯ Your data is linear

    ◯ You are working with image data

SUPERVISED LEARNING

7. Which of the following is not a method to avoid information leakage?

    Mark only one oval.

    ◯ Leave one out

    ◯ Cross validation

    ◯ Bootstrap sampling

    ◯ Train test split