

Project Proposal
ORIE5741
Prof. Udell

Yang Chang(yc2567)
Dongting Ma(dm892)

Question:

Our goal is to analyze crime history data, identify criminal defendant's likelihood of becoming a recidivist and help decide which inmates are ready for parole. We plan to answer the following questions:

- **What are some key characteristics when predicting recidivism?**
- **Are inmates with high COMPAS scores actually have a higher recidivism rate?**

Dataset:

We are primarily using data in a study conducted by Larson J "<https://github.com/propublica/compas-analysis/>". We will primarily focus on violent crime committed by inmates within two years of parole. In the dataset, there are 7214 observations and for every observation we have 20 variables such as name of the person, ethnicity ,reason of assessment, if he/she reoffends in two years, and their COMPAS scores. We plan to combine different variables with the best feature correlation to help make decisions on parole.

Project Value:

According to a recent report, the U.S. has one of the highest recidivism rates in the world: 76.6% of prisoners are rearrested within five years. This is a surprising number and our project is to help to predict if a criminal will reoffend based on COMPAS scores, number of priors, duration of custody and other features and thus reduce the recidivism rate. Reducing recidivism can generate substantial benefits for governments by reducing criminal justice costs, crime victimization costs, and the costs of incarceration to the reoffenders and their families. More importantly, it can help to make a more peaceful society.