

Chicago crime prediction

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Target Variable - “Index Crime”

- Larceny
- Burglary
- Motor Vehicle Theft
- Robbery
- Aggravated Battery
- Aggravated Assault
- Criminal Sexual Assault
- Arson
- Homicide (1st and 2nd Degree)



Examples of Non-Index Crimes

- Simple Battery
- Vandalism
- Drug Abuse
- Simple Assault
- Fraud
- Weapons Violation
- Prostitution
- Disorderly Conduct



Data

City of Chicago CLEAR system

- (Latitude, Longitude)
 - Time
 - Location description
-
- 2015 to 2017
 - 500,000 reports
 - 214,000 index
 - 290,000 non-index



Model

Random Forest Classifier

- Ideal mix of speed and accuracy
- Oversampling to increase recall



Model

Random Forest Classifier

- Ideal mix of speed and accuracy
- Oversampling via SMOTE to increase recall

49805	24354
23596	29998



Limitations and Next Steps

- High Bias
 - Add features
- Predicts relative probability



Thank you

