# 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
  - o 214,000 index
  - 290,000 non-index

### Model

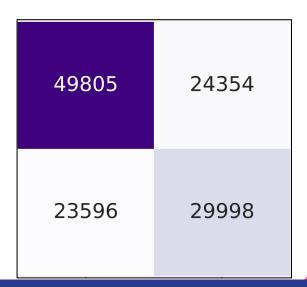
#### Random Forest Classifier

- 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



## **Limitations and Next Steps**

- High Bias
  - Add features
- Predicts relative probability

# Thank you

