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PS239T: Final Project

Results

**Recidivism Analysis**

Of the 5,914 sample **45.9 percent recidivated**. A quick comparison between the initial crime and subsequent crime is included in the table below. Interestingly, we see Battery as a high original crime at 23.6%, but not a common crime when we look at the recidivism data. Also, as expected, it looks like a lot of individuals have their recidivating event as a suspended license. This would be an interesting piece to look into if further data was available.

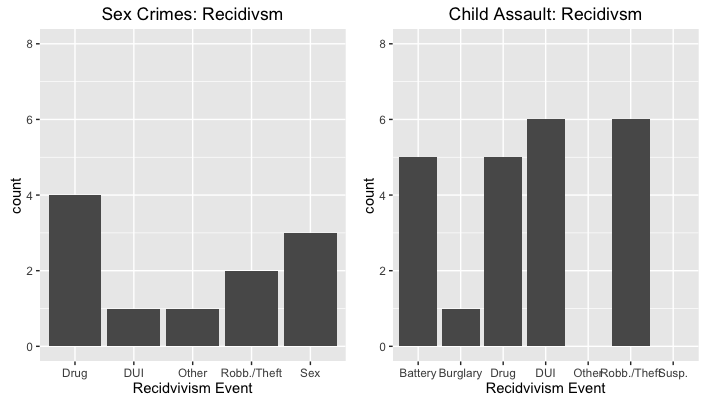
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| --- |
|  |
| Original Crime | Assault | Batt. | Burglary | Child Assault | Drug | DUI | Other | Robb. / Theft | Sex | Susp. |  |
| Assault | 0.10% | 0.50% | 0.00% | 0.10% | 0.50% | 0.40% | 1.00% | 0.20% | 0.00% | 0.10% | **2.90%** |
| Battery | 0.20% | 4.00% | 0.30% | 0.30% | 3.60% | 2.70% | 7.10% | 2.50% | 0.20% | 2.70% | **23.60%** |
| Burglary | 0.00% | 0.30% | 0.20% | 0.00% | 1.00% | 0.20% | 1.80% | 1.10% | 0.00% | 0.60% | **5.20%** |
| Child Assault | 0.00% | 0.20% | 0.00% | 0.00% | 0.20% | 0.20% | 0.70% | 0.20% | 0.00% | 0.40% | **1.90%** |
| Drug | 0.10% | 1.30% | 0.20% | 0.20% | 8.70% | 220% | 6.60% | 2.50% | 0.40% | 3.00% | **25.20%** |
| DUI | 0.00% | 0.60% | 0.10% | 0.10% | 1.00% | 2.50% | 2.40% | 0.70% | 0.00% | 2.10% | **9.50%** |
| Other | 0.00% | 1.20% | 0.30% | 0.20% | 3.20% | 1.40% | 5.50% | 1.50% | 0.00% | 1.90% | **15.20%** |
| Robb./Theft | 0.10% | 0.40% | 0.20% | 0.10% | 2.20% | 0.90% | 3.90% | 4.50% | 0.00% | 1.10% | **13.40%** |
| Sex | 0.00% | 0.00% | 0.00% | 0.00% | 0.20% | 0.00% | 0.00% | 0.10% | 0.10% | 0.00% | **0.40%** |
| Susp. | 0.00% | 0.10% | 0.00% | 0.10% | 0.30% | 0.70% | 0.50% | 0.20% | 0.00% | 0.90% | **2.80%** |
|  | **0.50%** | **8.60%** | **1.30%** | **1.10%** | **20.90%** | **11.10%** | **29.50%** | **13.50%** | **0.70%** | **12.80%** |  |

**Recidivism by Crime Type**

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This graph shows us that proportionally, individuals convicted of sex offense are more likely to recidivate in the first three months after release.

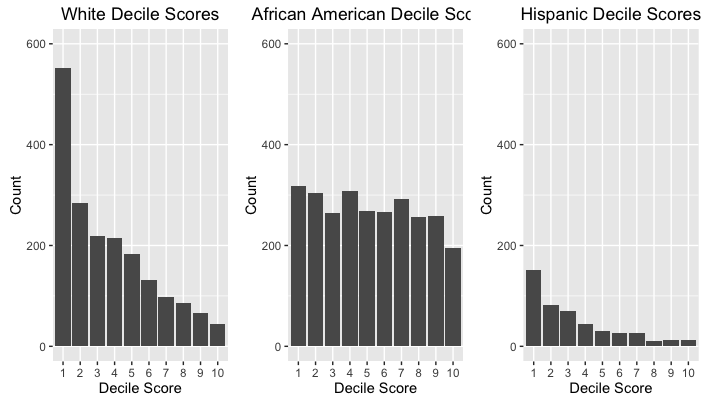
**Subsequent Recidivism Types: Sex Assault and Child Abuse**

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**Recidivism Crimes: Word Cloud**

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**Distribution of Decile Scores, by Race**

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**Regression Output for Risk Score And Recidivsm**

Descriptive Statistics

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Dependent variable:

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decile\_score recid

(1) (2)

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gender\_factorFemale 0.139\* -0.092\*\*\*

(0.072) (0.016)

age\_factor26-30 -1.284\*\*\* -0.079\*\*\*

(0.088) (0.020)

age\_factor30-40 -1.933\*\*\* -0.164\*\*\*

(0.079) (0.018)

age\_factor40-50 -2.809\*\*\* -0.239\*\*\*

(0.095) (0.021)

age\_factor50+ -3.454\*\*\* -0.285\*\*\*

(0.097) (0.022)

race\_factorAfrican-American 0.882\*\*\* 0.102\*\*\*

(0.105) (0.024)

race\_factorCaucasian 0.419\*\*\* 0.057\*\*

(0.107) (0.024)

race\_factorOther -0.283\* 0.025

(0.146) (0.033)

priors\_count 0.268\*\*\* 0.031\*\*\*

(0.007) (0.001)

recid1 0.743\*\*\*

(0.061)

crime\_factorM -0.501\*\*\* -0.033\*\*

(0.059) (0.013)

Constant 4.420\*\*\* 1.464\*\*\*

(0.114) (0.025)

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Observations 5,425 5,425

R2 0.468 0.141

Adjusted R2 0.467 0.140

Residual Std. Error 2.061 (df = 5413) 0.463 (df = 5414)

F Statistic 433.577\*\*\* (df = 11; 5413) 89.100\*\*\* (df = 10; 5414)

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Note: \*p<0.1; \*\*p<0.05; \*\*\*p<0.01