> summary(Crime)

Last Name First Name Age on Date of Crime Race Sex State

Length:1900 Length:1900 Length:1900 Length:1900 Length:1900 Length:1900

Class :character Class :character Class :character Class :character Class :character Class :character

Mode :character Mode :character Mode :character Mode :character Mode :character Mode :character

Tags CIU Guilty Plea IO Worst Crime Occurred Convicted

Length:1900 Min. :0.0000 Min. :0.0000 Min. :0 Min. :1.000 Min. :1955 Min. :1956

Class :character 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0 1st Qu.:1.000 1st Qu.:1986 1st Qu.:1988

Mode :character Median :0.0000 Median :0.0000 Median :0 Median :2.000 Median :1993 Median :1995

Mean :0.1237 Mean :0.2111 Mean :0 Mean :2.694 Mean :1994 Mean :1996

3rd Qu.:0.0000 3rd Qu.:0.0000 3rd Qu.:0 3rd Qu.:4.000 3rd Qu.:2002 3rd Qu.:2004

Max. :1.0000 Max. :1.0000 Max. :0 Max. :6.000 Max. :2016 Max. :2016

NA's :1 NA's :1

Exonerated Sentence Death Penalty? DNA only FC MWID

Min. : 1989 Length:1900 Min. :0.00000 Min. :0.0000 Min. :0.0000 Min. :0.0000

1st Qu.: 2001 Class :character 1st Qu.:0.00000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000

Median : 2008 Mode :character Median :0.00000 Median :0.0000 Median :0.0000 Median :0.0000

Mean : 2024 Mean :0.06105 Mean :0.1811 Mean :0.1242 Mean :0.3089

3rd Qu.: 2014 3rd Qu.:0.00000 3rd Qu.:0.0000 3rd Qu.:0.0000 3rd Qu.:1.0000

Max. :35494 Max. :1.00000 Max. :1.0000 Max. :1.0000 Max. :1.0000

F/MFE P/FA OM ILD State Statute? State Claim Made?

Min. :0.0000 Min. :0.0000 Min. :0.0000 Min. :0.0000 Length:1900 Min. :0.0000

1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.0000 Class :character 1st Qu.:0.0000

Median :0.0000 Median :1.0000 Median :0.0000 Median :0.0000 Mode :character Median :0.0000

Mean :0.2484 Mean :0.5553 Mean :0.4647 Mean :0.2421 Mean :0.4648

3rd Qu.:0.0000 3rd Qu.:1.0000 3rd Qu.:1.0000 3rd Qu.:0.0000 3rd Qu.:1.0000

Max. :1.0000 Max. :1.0000 Max. :1.0000 Max. :1.0000 Max. :1.0000

NA's :226

0 time? Prem? Pending? Denied? State Award? Amount...31

Min. :0.00000 Min. :0.00000 Min. :0.00000 Min. :0.0000 Length:1900 Length:1900

1st Qu.:0.00000 1st Qu.:0.00000 1st Qu.:0.00000 1st Qu.:0.0000 Class :character Class :character

Median :0.00000 Median :0.00000 Median :0.00000 Median :0.0000 Mode :character Mode :character

Mean :0.09857 Mean :0.08244 Mean :0.05081 Mean :0.0777

3rd Qu.:0.00000 3rd Qu.:0.00000 3rd Qu.:0.00000 3rd Qu.:0.0000

Max. :1.00000 Max. :1.00000 Max. :1.00000 Max. :1.0000

NA's :226 NA's :226 NA's :227 NA's :227

Non-Statutory Case Filed? No Time? Unfiled Dismissed or verdict for D Pending

Min. :0.000 Min. :0.00000 Min. :0.0000 Min. :0.0000 Min. :0.00000

1st Qu.:0.000 1st Qu.:0.00000 1st Qu.:0.0000 1st Qu.:0.0000 1st Qu.:0.00000

Median :0.000 Median :0.00000 Median :1.0000 Median :0.0000 Median :0.00000

Mean :0.416 Mean :0.09474 Mean :0.5042 Mean :0.1084 Mean :0.07947

3rd Qu.:1.000 3rd Qu.:0.00000 3rd Qu.:1.0000 3rd Qu.:0.0000 3rd Qu.:0.00000

Max. :1.000 Max. :1.00000 Max. :1.0000 Max. :1.0000 Max. :1.00000

NA's :1

Award via Settlement or Verdict for P Premature Amount...39 Years Lost

Min. :0.0000 Min. :0.00000 Length:1900 Min. : 0.000

1st Qu.:0.0000 1st Qu.:0.00000 Class :character 1st Qu.: 2.100

Median :0.0000 Median :0.00000 Mode :character Median : 7.000

Mean :0.2337 Mean :0.07895 Mean : 9.049

3rd Qu.:0.0000 3rd Qu.:0.00000 3rd Qu.:14.700

Max. :1.0000 Max. :1.00000 Max. :39.300

> summary(Crime$Exonerated)

Min. 1st Qu. Median Mean 3rd Qu. Max.

1989 2001 2008 2024 2014 35494

> exonerated <- Crime$Exonerated

> exonerated <- exonerated[ exonerated < max(exonerated)]

> summary(exonerated)

Min. 1st Qu. Median Mean 3rd Qu. Max.

1989 2001 2008 2006 2014 2017

Simple Inquiries

1. **Number of incarcerated (not 0 time) exonerees.**

> table(Crime$`0 time?`)

0 1

1509 165

> prop.table(table(Crime$`0 time?`))

0 1

0.90143369 0.09856631

1. **Number of incarcerated exonerees serving one year or less**

> less\_than\_1 <- length(which(Crime$`Years Lost`<= 1))

> less\_than\_1

[1] 364

1. **Number of incarcerated exonerees serving more than one year**

> more\_than\_1 <- length(which(Crime$`Years Lost`> 1))

> more\_than\_1

[1] 1536

1. **Number of total exonerees by race/gender**

> table(Crime$Race)

Asian Back Black caucasian Caucasian Hispanic Native American

13 1 920 1 722 222 12

Other

9

> prop.table(table(Crime$Race))

Asian Back Black caucasian Caucasian Hispanic Native American

0.0068421053 0.0005263158 0.4842105263 0.0005263158 0.3800000000 0.1168421053 0.0063157895

Other

0.0047368421

> round(prop.table(table(Crime$Race)),3)

Asian Back Black caucasian Caucasian Hispanic Native American

0.007 0.001 0.484 0.001 0.380 0.117 0.006

Other

0.005

> barplot(table(Crime$Race))

> table(Crime$Sex)

Female Male

180 1720

> barplot(table(Crime$Sex))

> prop.table(table(Crime$Sex))

Female Male

0.09473684 0.90526316

> table(Crime$Race, Crime$Sex)

Female Male

Asian 0 13

Back 0 1

Black 47 873

caucasian 1 0

Caucasian 108 614

Hispanic 22 200

Native American 1 11

Other 1 8

> ftable(round(prop.table(table(Crime$Race, Crime$Sex)),3))

Female Male

Asian 0.000 0.007

Back 0.000 0.001

Black 0.025 0.459

caucasian 0.001 0.000

Caucasian 0.057 0.323

Hispanic 0.012 0.105

Native American 0.001 0.006

Other 0.001 0.004

> mosaicplot(data, main = "Exonerees by Race and Gender")

1. **Number of total incarcerated (not 0 time) by race/gender**

> df\_race\_gender <- data.frame(Crime$`0 time?`, Crime$Race, Crime$Sex)

> head(df\_race\_gender)

Crime..0.time.. Crime.Race Crime.Sex

1 0 Black Male

2 0 Black Male

3 0 Caucasian Male

4 1 Caucasian Male

5 0 Caucasian Male

6 0 Caucasian Male

> new\_df\_race\_gender <- df\_race\_gender %>% filter(Crime$`0 time?`<1)

> head(new\_df\_race\_gender)

Crime..0.time.. Crime.Race Crime.Sex

1 0 Black Male

2 0 Black Male

3 0 Caucasian Male

4 0 Caucasian Male

5 0 Caucasian Male

6 0 Black Male

> table(new\_df\_gender)

Crime.Sex

Crime..0.time.. Female Male

0 113 1396

> table(new\_df\_race\_gender)

, , Crime.Sex = Female

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American Other

0 0 0 34 1 68 8 1 1

, , Crime.Sex = Male

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American Other

0 9 1 747 0 465 163 5 6

> prop.table(table(new\_df\_race\_gender))

, , Crime.Sex = Female

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American

0 0.0000000000 0.0000000000 0.0225314778 0.0006626905 0.0450629556 0.0053015242 0.0006626905

Crime.Race

Crime..0.time.. Other

0 0.0006626905

, , Crime.Sex = Male

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American

0 0.0059642147 0.0006626905 0.4950298211 0.0000000000 0.3081510934 0.1080185553 0.0033134526

Crime.Race

Crime..0.time.. Other

0 0.0039761431

> round(prop.table(table(new\_df\_race\_gender)),3)

, , Crime.Sex = Female

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American Other

0 0.000 0.000 0.023 0.001 0.045 0.005 0.001 0.001

, , Crime.Sex = Male

Crime.Race

Crime..0.time.. Asian Back Black caucasian Caucasian Hispanic Native American Other

0 0.006 0.001 0.495 0.000 0.308 0.108 0.003 0.004

> ftable(round(prop.table(table(new\_df\_race\_gender)),3))

Crime.Sex Female Male

Crime..0.time.. Crime.Race

0 Asian 0.000 0.006

Back 0.000 0.001

Black 0.023 0.495

caucasian 0.001 0.000

Caucasian 0.045 0.308

Hispanic 0.005 0.108

Native American 0.001 0.003

Other 0.001 0.004

1. **Average number of years lost by race/gender**

> df\_race\_yearlost <- data.frame(Crime$`Years Lost`, Crime$Race)

> head(df\_race\_yearlost)

Crime..Years.Lost. Crime.Race

1 1.7 Black

2 0.1 Black

3 19.5 Caucasian

4 0.0 Caucasian

5 2.6 Caucasian

6 5.7 Caucasian

> head(table(df\_race\_yearlost))

Crime.Race

Crime..Years.Lost. Asian Back Black caucasian Caucasian Hispanic Native American Other

0 2 0 56 0 85 37 2 1

0.1 1 0 18 0 10 5 0 0

0.2 0 0 16 0 8 4 0 0

0.3 1 0 13 0 8 1 0 0

0.4 0 0 7 0 8 1 0 0

0.5 0 0 9 0 8 1 0 0

> colMeans(table(df\_race\_yearlost))

Asian Back Black caucasian Caucasian Hispanic Native American

0.042763158 0.003289474 3.026315789 0.003289474 2.375000000 0.730263158 0.039473684

Other

0.029605263

> round(colMeans(table(df\_race\_yearlost)),3)

Asian Back Black caucasian Caucasian Hispanic Native American

0.043 0.003 3.026 0.003 2.375 0.730 0.039

Other

0.030

> df\_gender\_yearlost <- data.frame(Crime$`Years Lost`, Crime$Sex)

> head(df\_gender\_yearlost)

Crime..Years.Lost. Crime.Sex

1 1.7 Male

2 0.1 Male

3 19.5 Male

4 0.0 Male

5 2.6 Male

6 5.7 Male

> head(table(df\_gender\_yearlost))

Crime.Sex

Crime..Years.Lost. Female Male

0 50 133

0.1 6 28

0.2 5 23

0.3 3 20

0.4 4 12

0.5 2 16

> colMeans(table(df\_gender\_yearlost))

Female Male

0.5921053 5.6578947

1. **Number exonerated through CIUs./not through CIUs**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$CIU)

0 1

1664 235

CIU – whether the exoneration was the result of work by a Conviction Integrity Unit

1 = yes

0 = no

**seeking/receiving state compensation**

> table(Crime$CIU, Crime$`State Claim Made?`)

0 1

0 749 696

1 146 82

> ftable(prop.table(table(Crime$CIU, Crime$`State Claim Made?`)))

0 1

0 0.44769874 0.41601913

1 0.08726838 0.04901375

**seeking/receiving civil rights compensation**

> table(Crime$CIU, Crime$`Non-Statutory Case Filed?`)

0 1

0 933 730

1 175 60

> ftable(prop.table(table(Crime$CIU, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.49157007 0.38461538

1 0.09220232 0.03161222

1. **Number with guilty pleas exonerated/without guilty pleas**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$`Guilty Plea`)

0 1

1499 401

Guilty Plea – whether the exoneree pled guilty to the crime

1 = yes

0 = no

**seeking/receiving state compensation**

> table(Crime$`Guilty Plea`, Crime$`State Claim Made?`)

0 1

0 615 681

1 281 97

> ftable(prop.table(table(Crime$`Guilty Plea`, Crime$`State Claim Made?`)))

0 1

0 0.36738351 0.40681004

1 0.16786141 0.05794504

**seeking/receiving civil rights compensation**

> table(Crime$`Guilty Plea`, Crime$`Non-Statutory Case Filed?`)

0 1

0 808 690

1 301 100

> ftable(prop.table(table(Crime$`Guilty Plea`, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.42548710 0.36334913

1 0.15850448 0.05265929

1. **Number assisted by IO/not assisted by IO**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$IO)

0

1899

> summary(Crime$IO)

Min. 1st Qu. Median Mean 3rd Qu. Max. NA's

0 0 0 0 0 0 1

> length(Crime$IO)

[1] 1900

IO – whether the exoneree was helped by an innocence organization

1 = yes

0 = no

**seeking/receiving state compensation**

> table(Crime$IO, Crime$`State Claim Made?`)

0 1

0 895 778

> ftable(prop.table(table(Crime$IO, Crime$`State Claim Made?`)))

0 1

1. 0.5349671 0.4650329

**seeking/receiving civil rights compensation**

> table(Crime$IO, Crime$`Non-Statutory Case Filed?`)

0 1

0 1108 790

> ftable(prop.table(table(Crime$IO, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.5837724 0.4162276

1. **Number of DNA exonerees/not DNA exonerees**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$`DNA only`)

0 1

1556 344

DNA: Was the defendant exonerated by DNA analysis? Is this an Innocence Project case?

0=NO

1=YES

**seeking/receiving state compensation**

> table(Crime$`DNA only`, Crime$`State Claim Made?`)

0 1

0 841 530

1 55 248

> ftable(prop.table(table(Crime$`DNA only`, Crime$`State Claim Made?`)))

0 1

0 0.50238949 0.31660693

1 0.03285544 0.14814815

**seeking/receiving civil rights compensation**

> table(Crime$`DNA only`, Crime$`Non-Statutory Case Filed?`)

0 1

0 957 598

1 152 192

> ftable(prop.table(table(Crime$`DNA only`, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.50394945 0.31490258

1 0.08004213 0.10110585

1. **Number of death penalty cases/not death penalty cases**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$`Death Penalty?`)

0 1

1784 116

Death Penalty: Was the sentence the death penalty?

0=NO

1=YES

**seeking/receiving state compensation**

> table(Crime$`Death Penalty?`, Crime$`State Claim Made?`)

0 1

0 850 729

1 46 49

> ftable(prop.table(table(Crime$`Death Penalty?`, Crime$`State Claim Made?`)))

0 1

0 0.50776583 0.43548387

1 0.02747909 0.02927121

**seeking/receiving civil rights compensation**

> table(Crime$`Death Penalty?`, Crime$`Non-Statutory Case Filed?`)

0 1

0 1058 725

1 51 65

> ftable(prop.table(table(Crime$`Death Penalty?`, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.55713533 0.38177988

1 0.02685624 0.03422854

1. **Number of each crime**
   1. **% seeking/receiving state compensation**
   2. **% seeking/receiving civil rights compensation**

> table(Crime$`Worst Crime`)

1 2 3 4 5 6

783 296 213 224 96 288

Worst Crime: What was the worst crime of which the defendant was convicted?

1=murder

2=sexual assault

3=drugs

4=child sexual abuse

5=robbery

6=other

**seeking/receiving state compensation**

> table(Crime$`Worst Crime`, Crime$`State Claim Made?`)

0 1

1 305 360

2 92 169

3 179 22

4 113 90

5 41 45

6 166 92

> table1 <- table(Crime$`Worst Crime`, Crime$`State Claim Made?`)

> ftable(table1)

0 1

1 305 360

2 92 169

3 179 22

4 113 90

5 41 45

6 166 92

> prop.table(table1)

0 1

1 0.18219833 0.21505376

2 0.05495818 0.10095579

3 0.10692951 0.01314217

4 0.06750299 0.05376344

5 0.02449223 0.02688172

6 0.09916368 0.05495818

> ftable(prop.table(table1))

0 1

1 0.18219833 0.21505376

2 0.05495818 0.10095579

3 0.10692951 0.01314217

4 0.06750299 0.05376344

5 0.02449223 0.02688172

6 0.09916368 0.05495818

**seeking/receiving civil rights compensation**

> table(Crime$`Worst Crime`, Crime$`Non-Statutory Case Filed?`)

0 1

1 328 454

2 182 114

3 187 26

4 152 72

5 69 27

6 191 97

> ftable(prop.table(table(Crime$`Worst Crime`, Crime$`Non-Statutory Case Filed?`)))

0 1

1 0.17272249 0.23907320

2 0.09583992 0.06003160

3 0.09847288 0.01369142

4 0.08004213 0.03791469

5 0.03633491 0.01421801

6 0.10057925 0.05107952

1. **Number of each tag**

**a. % seeking/receiving state compensation**

**b. % seeking/receiving civil rights compensation**

More Complex Inquiries

1. What is the relationship between race and the likelihood of filing a 1) state and/or 2) civil rights claim?
   1. Has that relationship changed over time?
   2. What impact does the time lost have?

> table(Crime$Race, Crime$`State Claim Made?`)

> ftable(table1)

0 1

Asian 7 4

Back 1 0

Black 377 459

caucasian 0 1

Caucasian 379 224

Hispanic 122 85

Native American 3 4

Other 7 1

> table2 <- table(Crime$Race, Crime$`State Claim Made?`)

> prop.table(table2)

> ftable(prop.table(table2))

0 1

Asian 0.0041816010 0.0023894863

Back 0.0005973716 0.0000000000

Black 0.2252090800 0.2741935484

caucasian 0.0000000000 0.0005973716

Caucasian 0.2264038232 0.1338112306

Hispanic 0.0728793309 0.0507765830

Native American 0.0017921147 0.0023894863

Other 0.0041816010 0.0005973716

> ftable(round(prop.table(table2),3))

0 1

Asian 0.004 0.002

Back 0.001 0.000

Black 0.225 0.274

caucasian 0.000 0.001

Caucasian 0.226 0.134

Hispanic 0.073 0.051

Native American 0.002 0.002

Other 0.004 0.001

> table(Crime$Race, Crime$`Non-Statutory Case Filed?`)

> ftable(table(Crime$Race, Crime$`Non-Statutory Case Filed?`))

0 1

Asian 9 4

Back 0 1

Black 499 421

caucasian 1 0

Caucasian 455 266

Hispanic 130 92

Native American 7 5

Other 8 1

> prop.table(table(Crime$Race, Crime$`Non-Statutory Case Filed?`))

> ftable(round(prop.table(table(Crime$Race, Crime$`Non-Statutory Case Filed?`)),3))

0 1

Asian 0.005 0.002

Back 0.000 0.001

Black 0.263 0.222

caucasian 0.001 0.000

Caucasian 0.240 0.140

Hispanic 0.068 0.048

Native American 0.004 0.003

Other 0.004 0.001

> df1 <- data.frame(race, filing\_state)

> chisq.test(table(df1$race, df1$filing\_state))

Pearson's Chi-squared test

data: table(df1$race, df1$filing\_state)

X-squared = 53.91, df = 7, p-value = 2.45e-09

> df2 <- data.frame(race, filing\_civil)

> chisq.test(table(df2$race, df2$filing\_civil))

Pearson's Chi-squared test

data: table(df2$race, df2$filing\_civil)

X-squared = 19.321, df = 7, p-value = 0.00724

1. What is the relationship between race and the likelihood of prevailing on a 1) state and/or 2) civil rights claim?
   1. Has that relationship changed over time?
   2. What impact does the time lost have?

> table(Crime$Race, Crime$`State Award?`)

0 1 2 N pending premature Y

Asian 6 3 2 0 0 0 0

Back 0 0 1 0 0 0 0

Black 355 358 122 0 1 0 8

caucasian 1 0 0 0 0 0 0

Caucasian 391 135 77 1 0 0 0

Hispanic 123 70 14 0 0 0 0

Native American 4 2 1 0 0 0 0

Other 5 1 1 0 0 1 0

> ftable(prop.table(table(Crime$Race, Crime$`State Award?`)))

0 1 2 N pending premature

Asian 0.0035650624 0.0017825312 0.0011883541 0.0000000000 0.0000000000 0.0000000000

Back 0.0000000000 0.0000000000 0.0005941771 0.0000000000 0.0000000000 0.0000000000

Black 0.2109328580 0.2127153892 0.0724896019 0.0000000000 0.0005941771 0.0000000000

caucasian 0.0005941771 0.0000000000 0.0000000000 0.0000000000 0.0000000000 0.0000000000

Caucasian 0.2323232323 0.0802139037 0.0457516340 0.0005941771 0.0000000000 0.0000000000

Hispanic 0.0730837790 0.0415923945 0.0083184789 0.0000000000 0.0000000000 0.0000000000

Native American 0.0023767083 0.0011883541 0.0005941771 0.0000000000 0.0000000000 0.0000000000

Other 0.0029708853 0.0005941771 0.0005941771 0.0000000000 0.0000000000 0.0005941771

1. What is the relationship between race and the amount of recovery in prevailing civil rights claims per year of incarceration?
   1. Has that relationship changed over time?
2. What is the relationship between gender and the likelihood of filing a 1) state and/or 2) civil rights claim?
   1. Has that relationship changed over time?
   2. What impact does the time lost have?

> table(Crime$Sex, Crime$`State Claim Made?`)

0 1

Female 118 40

Male 778 738

> ftable(prop.table(table(Crime$Sex, Crime$`State Claim Made?`)))

0 1

Female 0.07048984 0.02389486

Male 0.46475508 0.44086022

> table(Crime$Sex, Crime$`Non-Statutory Case Filed?`)

0 1

Female 123 57

Male 986 733

> ftable(prop.table(table(Crime$Sex, Crime$`Non-Statutory Case Filed?`)))

0 1

Female 0.06477093 0.03001580

Male 0.51922064 0.38599263

1. What is the relationship between gender and the likelihood of prevailing on a 1) state and/or 2) civil rights claim?
   1. Has that relationship changed over time?
   2. What impact does the time lost have?

> table(Crime$Sex, Crime$`State Award?`)

0 1 2 N pending premature Y

Female 115 27 16 0 0 0 0

Male 770 542 202 1 1 1 8

> ftable(prop.table(table(Crime$Sex, Crime$`State Award?`)))

0 1 2 N pending premature Y

Female 0.0683303624 0.0160427807 0.0095068330 0.0000000000 0.0000000000 0.0000000000 0.0000000000

Male 0.4575163399 0.3220439691 0.1200237671 0.0005941771 0.0005941771 0.0005941771 0.0047534165

1. What is the relationship between gender and the amount of recovery per year or incarceration?
   1. Has that relationship changed over time?
2. What is the relationship between geographic area (West, Midwest, East, South) and the likelihood of filing a 1) state and/or 2) civil rights claim?
3. What is the relationship between geographic area and the likelihood of prevailing on a 1) state and/or civil rights claim?
4. What is the relationship between blue (Clinton) and red states (Trump) and the likelihood of filing a 1) state and/or 2) civil rights claim?

> table(Crime$State, Crime$`State Claim Made?`)

0 1

Alabama 18 8

Alaska 0 0

Arizona 0 0

Arkansas 0 0

California 114 59

Colorado 6 1

Connecticut 7 13

Delaware 0 0

District of Columbia 8 8

Florida 53 8

Georgia 0 0

Guam 0 0

Hawaii 3 0

Idaho 0 0

Illinois 70 114

Indiana 0 0

Iowa 10 4

Kansas 0 0

Kentucky 0 0

Louisiana 13 34

Maine 2 0

Maryland 20 4

Massachusetts 18 33

Michigan 42 26

Minnesota 7 4

Mississippi 2 14

Missouri 31 8

Montana 9 0

Nebraska 2 7

Nevada 0 0

New Hampshire 1 0

New Jersey 13 14

New Mexico 0 0

New York 59 165

North Carolina 29 30

North Dakota 0 0

Ohio 15 44

Oklahoma 25 9

Oregon 0 0

Pennsylvania 0 0

Puerto Rico 0 0

Rhode Island 0 0

South Carolina 0 0

South Dakota 0 0

Tennessee 16 2

Texas 214 95

Utah 9 5

Vermont 0 1

Virginia 17 29

Washington 29 15

West Virginia 4 6

Wisconsin 30 18

Wyoming 0 0

> sort(table1[,-1], decreasing = T)

New York Illinois Texas California Ohio

165 114 95 59 44

Louisiana Massachusetts North Carolina Virginia Michigan

34 33 30 29 26

Wisconsin Washington Mississippi New Jersey Connecticut

18 15 14 14 13

Oklahoma Alabama District of Columbia Florida Missouri

9 8 8 8 8

Nebraska West Virginia Utah Iowa Maryland

7 6 5 4 4

Minnesota Tennessee Colorado Vermont Alaska

4 2 1 1 0

Arizona Arkansas Delaware Georgia Guam

0 0 0 0 0

Hawaii Idaho Indiana Kansas Kentucky

0 0 0 0 0

Maine Montana Nevada New Hampshire New Mexico

0 0 0 0 0

North Dakota Oregon Pennsylvania Puerto Rico Rhode Island

0 0 0 0 0

South Carolina South Dakota Wyoming

0 0 0

> table(Crime$State, Crime$`Non-Statutory Case Filed?`)

0 1

Alabama 22 4

Alaska 4 4

Arizona 14 4

Arkansas 4 2

California 77 96

Colorado 4 3

Connecticut 12 8

Delaware 0 2

District of Columbia 10 6

Florida 51 10

Georgia 25 4

Guam 1 0

Hawaii 2 1

Idaho 0 2

Illinois 37 147

Indiana 5 19

Iowa 11 3

Kansas 3 4

Kentucky 4 7

Louisiana 22 25

Maine 1 1

Maryland 20 4

Massachusetts 24 27

Michigan 36 32

Minnesota 11 0

Mississippi 9 7

Missouri 22 17

Montana 7 2

Nebraska 3 6

Nevada 3 6

New Hampshire 1 0

New Jersey 14 13

New Mexico 5 1

New York 94 130

North Carolina 32 27

North Dakota 2 0

Ohio 33 26

Oklahoma 18 16

Oregon 12 4

Pennsylvania 30 30

Puerto Rico 2 4

Rhode Island 4 1

South Carolina 4 3

South Dakota 3 1

Tennessee 12 6

Texas 281 28

Utah 12 2

Vermont 0 0

Virginia 37 9

Washington 25 19

West Virginia 3 7

Wisconsin 40 8

Wyoming 1 2

> table2 <- table(Crime$State, Crime$`Non-Statutory Case Filed?`)

> sort(table2[,-1], decreasing = T)

Illinois New York California Michigan Pennsylvania

147 130 96 32 30

Texas Massachusetts North Carolina Ohio Louisiana

28 27 27 26 25

Indiana Washington Missouri Oklahoma New Jersey

19 19 17 16 13

Florida Virginia Connecticut Wisconsin Kentucky

10 9 8 8 7

Mississippi West Virginia District of Columbia Nebraska Nevada

7 7 6 6 6

Tennessee Alabama Alaska Arizona Georgia

6 4 4 4 4

Kansas Maryland Oregon Puerto Rico Colorado

4 4 4 4 3

Iowa South Carolina Arkansas Delaware Idaho

3 3 2 2 2

Montana Utah Wyoming Hawaii Maine

2 2 2 1 1

New Mexico Rhode Island South Dakota Guam Minnesota

1 1 1 0 0

New Hampshire North Dakota Vermont

0 0 0

1. What is the relationship between blue (Clinton) and red states (Trump) and the likelihood of prevailing on a 1) state and/or 2) civil rights claim?

> table(Crime$State, Crime$`Award via Settlement or Verdict for P`)

0 1

Alabama 25 1

Alaska 8 0

Arizona 16 2

Arkansas 6 0

California 124 49

Colorado 6 1

Connecticut 17 3

Delaware 2 0

District of Columbia 13 3

Florida 53 8

Georgia 28 1

Guam 1 0

Hawaii 2 1

Idaho 1 1

Illinois 99 85

Indiana 16 8

Iowa 12 2

Kansas 4 3

Kentucky 9 2

Louisiana 36 11

Maine 2 0

Maryland 22 2

Massachusetts 29 22

Michigan 49 19

Minnesota 11 0

Mississippi 12 4

Missouri 32 7

Montana 7 2

Nebraska 3 6

Nevada 4 5

New Hampshire 1 0

New Jersey 20 7

New Mexico 6 0

New York 128 96

North Carolina 45 14

North Dakota 2 0

Ohio 47 12

Oklahoma 25 9

Oregon 14 2

Pennsylvania 51 9

Puerto Rico 4 2

Rhode Island 4 1

South Carolina 7 0

South Dakota 4 0

Tennessee 17 1

Texas 300 9

Utah 13 1

Vermont 0 1

Virginia 39 7

Washington 30 14

West Virginia 5 5

Wisconsin 43 5

Wyoming 2 1

> table3 <- table(Crime$State, Crime$`Non-Statutory Case Filed?`)

> sort(table3[,-1], decreasing = T)

Illinois New York California Michigan Pennsylvania

147 130 96 32 30

Texas Massachusetts North Carolina Ohio Louisiana

28 27 27 26 25

Indiana Washington Missouri Oklahoma New Jersey

19 19 17 16 13

Florida Virginia Connecticut Wisconsin Kentucky

10 9 8 8 7

Mississippi West Virginia District of Columbia Nebraska Nevada

7 7 6 6 6

Tennessee Alabama Alaska Arizona Georgia

6 4 4 4 4

Kansas Maryland Oregon Puerto Rico Colorado

4 4 4 4 3

Iowa South Carolina Arkansas Delaware Idaho

3 3 2 2 2

Montana Utah Wyoming Hawaii Maine

2 2 2 1 1

New Mexico Rhode Island South Dakota Guam Minnesota

1 1 1 0 0

New Hampshire North Dakota Vermont

0 0 0

1. What is the relationship between CIU and filing/prevailing on state statutory and/or civil rights claims?

> table(Crime$CIU, Crime$`State Claim Made?`)

0 1

0 749 696

1 146 82

> ftable(prop.table(table(Crime$CIU, Crime$`State Claim Made?`)))

0 1

0 0.44769874 0.41601913

1 0.08726838 0.04901375

> table(Crime$CIU, Crime$`Non-Statutory Case Filed?`)

0 1

0 933 730

1 175 60

> ftable(prop.table(table(Crime$CIU, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.49157007 0.38461538

1 0.09220232 0.03161222

1. What is the relationship between a guilty plea and filing/prevailing on state statutory and/or civil rights claims?

> table(Crime$`Guilty Plea`, Crime$`State Claim Made?`)

0 1

0 615 681

1 281 97

> ftable(prop.table(table(Crime$`Guilty Plea`, Crime$`State Claim Made?`)))

0 1

0 0.36738351 0.40681004

1 0.16786141 0.05794504

> table(Crime$`Guilty Plea`, Crime$`Non-Statutory Case Filed?`)

0 1

0 808 690

1 301 100

> ftable(prop.table(table(Crime$`Guilty Plea`, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.42548710 0.36334913

1 0.15850448 0.05265929

1. What is the relationship between IO and filing/prevailing on state statutory and/or civil rights claims?

> table(Crime$IO, Crime$`Non-Statutory Case Filed?`)

0 1

0 1108 790

> ftable(prop.table(table(Crime$IO, Crime$`Non-Statutory Case Filed?`)))

0 1

0 0.5837724 0.4162276

> table(Crime$IO, Crime$`State Claim Made?`)

0 1

0 895 778

> ftable(prop.table(table(Crime$IO, Crime$`State Claim Made?`)))

0 1

0 0.5349671 0.4650329

1. What is the relationship between the crime allegedly committed and filing/prevailing? (I sense that those wrongly convicted of sex crimes are less likely.)

> table(Crime$`Worst Crime`, Crime$`State Award?`)

0 1 2 N pending premature Y

1 319 263 82 1 1 0 0

2 84 148 29 0 0 0 6

3 139 13 49 0 0 0 1

4 121 61 21 0 0 0 0

5 48 31 7 0 0 0 1

6 174 53 30 0 0 1 0

> ftable(round(prop.table(table(Crime$`Worst Crime`, Crime$`State Award?`)),3))

0 1 2 N pending premature Y

1 0.190 0.156 0.049 0.001 0.001 0.000 0.000

2 0.050 0.088 0.017 0.000 0.000 0.000 0.004

3 0.083 0.008 0.029 0.000 0.000 0.000 0.001

4 0.072 0.036 0.012 0.000 0.000 0.000 0.000

5 0.029 0.018 0.004 0.000 0.000 0.000 0.001

6 0.103 0.031 0.018 0.000 0.000 0.001 0.000

1. What is the relationship between the crime allegedly committed and amount recovered per year in civil rights claims?
2. What is the relationship between year of exoneration and rates of filing/prevailing on state statutory and/or civil rights claims? (I sense that there has been more filing and recoveries over time)

> table(Crime$Exonerated, Crime$`State Claim Made?`)

0 1

1989 12 8

1990 16 10

1991 25 5

1992 19 10

1993 16 8

1994 18 10

1995 14 15

1996 19 18

1997 22 20

1998 23 8

1999 26 16

2000 35 26

2001 50 32

2002 29 21

2003 25 43

2004 20 23

2005 22 30

2006 23 29

2007 29 35

2008 27 32

2009 27 48

2010 29 40

2011 25 37

2012 32 58

2013 44 40

2014 68 59

2015 92 44

2016 92 48

2017 16 5

35494 1 0

> ftable(round(prop.table(table(Crime$Exonerated, Crime$`State Claim Made?`)),3))

0 1

1989 0.007 0.005

1990 0.010 0.006

1991 0.015 0.003

1992 0.011 0.006

1993 0.010 0.005

1994 0.011 0.006

1995 0.008 0.009

1996 0.011 0.011

1997 0.013 0.012

1998 0.014 0.005

1999 0.016 0.010

2000 0.021 0.016

2001 0.030 0.019

2002 0.017 0.013

2003 0.015 0.026

2004 0.012 0.014

2005 0.013 0.018

2006 0.014 0.017

2007 0.017 0.021

2008 0.016 0.019

2009 0.016 0.029

2010 0.017 0.024

2011 0.015 0.022

2012 0.019 0.035

2013 0.026 0.024

2014 0.041 0.035

2015 0.055 0.026

2016 0.055 0.029

2017 0.010 0.003

35494 0.001 0.000

> table(Crime$Exonerated, Crime$`State Award?`)

0 1 2 N pending premature Y

1989 15 5 0 0 0 0 0

1990 22 4 0 0 0 0 0

1991 26 3 1 0 0 0 0

1992 22 7 0 0 0 0 1

1993 20 4 0 0 0 0 0

1994 23 5 0 0 0 0 0

1995 18 11 0 0 0 0 0

1996 18 17 2 0 0 0 0

1997 30 11 1 0 0 0 0

1998 25 4 2 1 0 0 0

1999 26 13 3 0 0 0 1

2000 40 19 2 0 0 0 1

2001 55 26 1 0 0 0 0

2002 32 17 1 0 0 0 0

2003 30 35 3 0 0 0 0

2004 22 17 4 0 0 0 1

2005 24 26 2 0 0 0 1

2006 24 26 2 0 0 0 0

2007 36 26 2 0 0 0 2

2008 27 26 6 0 0 0 0

2009 31 37 7 0 0 0 0

2010 30 33 6 0 0 0 0

2011 30 26 6 0 0 0 1

2012 35 48 7 0 0 0 0

2013 43 35 5 0 1 0 0

2014 76 37 13 0 0 1 0

2015 60 24 52 0 0 0 0

2016 41 25 74 0 0 0 0

2017 3 2 16 0 0 0 0

35494 1 0 0 0 0 0 0

> ftable(round(prop.table(table(Crime$Exonerated, Crime$`State Award?`)),3))

0 1 2 N pending premature Y

1989 0.009 0.003 0.000 0.000 0.000 0.000 0.000

1990 0.013 0.002 0.000 0.000 0.000 0.000 0.000

1991 0.015 0.002 0.001 0.000 0.000 0.000 0.000

1992 0.013 0.004 0.000 0.000 0.000 0.000 0.001

1993 0.012 0.002 0.000 0.000 0.000 0.000 0.000

1994 0.014 0.003 0.000 0.000 0.000 0.000 0.000

1995 0.011 0.007 0.000 0.000 0.000 0.000 0.000

1996 0.011 0.010 0.001 0.000 0.000 0.000 0.000

1997 0.018 0.007 0.001 0.000 0.000 0.000 0.000

1998 0.015 0.002 0.001 0.001 0.000 0.000 0.000

1999 0.015 0.008 0.002 0.000 0.000 0.000 0.001

2000 0.024 0.011 0.001 0.000 0.000 0.000 0.001

2001 0.033 0.015 0.001 0.000 0.000 0.000 0.000

2002 0.019 0.010 0.001 0.000 0.000 0.000 0.000

2003 0.018 0.021 0.002 0.000 0.000 0.000 0.000

2004 0.013 0.010 0.002 0.000 0.000 0.000 0.001

2005 0.014 0.015 0.001 0.000 0.000 0.000 0.001

2006 0.014 0.015 0.001 0.000 0.000 0.000 0.000

2007 0.021 0.015 0.001 0.000 0.000 0.000 0.001

2008 0.016 0.015 0.004 0.000 0.000 0.000 0.000

2009 0.018 0.022 0.004 0.000 0.000 0.000 0.000

2010 0.018 0.020 0.004 0.000 0.000 0.000 0.000

2011 0.018 0.015 0.004 0.000 0.000 0.000 0.001

2012 0.021 0.029 0.004 0.000 0.000 0.000 0.000

2013 0.026 0.021 0.003 0.000 0.001 0.000 0.000

2014 0.045 0.022 0.008 0.000 0.000 0.001 0.000

2015 0.036 0.014 0.031 0.000 0.000 0.000 0.000

2016 0.024 0.015 0.044 0.000 0.000 0.000 0.000

2017 0.002 0.001 0.010 0.000 0.000 0.000 0.000

35494 0.001 0.000 0.000 0.000 0.000 0.000 0.000

1. What is the relationship between whether the exoneration was a result of DNA and filing/prevailing on state statutory and/or civil rights claims? (I sense it would be higher)

0 1

0 841 530

1 55 248

> ftable(prop.table(table(Crime$`DNA only`, Crime$`State Claim Made?`)))

0 1

0 0.50238949 0.31660693

1 0.03285544 0.14814815

> table(Crime$`DNA only`, Crime$`State Award?`)

0 1 2 N pending premature Y

0 827 340 202 1 1 1 2

1 58 229 16 0 0 0 6

> ftable(round(prop.table(table(Crime$`DNA only`, Crime$`State Award?`)),3))

0 1 2 N pending premature Y

0 0.491 0.202 0.120 0.001 0.001 0.001 0.001

1 0.034 0.136 0.010 0.000 0.000 0.000 0.004

1. What is the relationship between whether it was a death penalty case and filing/prevailing on state statutory and/or civil rights claims?

> table(Crime$`Death Penalty?`, Crime$`State Claim Made?`)

0 1

0 850 729

1 46 49

> ftable(prop.table(table(Crime$`Death Penalty?`, Crime$`State Claim Made?`)))

0 1

0 0.50776583 0.43548387

1 0.02747909 0.02927121

> table(Crime$`Death Penalty?`, Crime$`State Award?`)

0 1 2 N pending premature Y

0 829 535 213 1 1 1 8

1 56 34 5 0 0 0 0

> ftable(round(prop.table(table(Crime$`Death Penalty?`, Crime$`State Award?`)),3))

0 1 2 N pending premature Y

0 0.493 0.318 0.127 0.001 0.001 0.001 0.005

1 0.033 0.020 0.003 0.000 0.000 0.000 0.000

1. What is the relationship between each of the NRE tags and filing/prevailing on state statutory and/or civil rights claims? (I would think that the chances of filing and prevailing in civil rights claims are highest in OM cases.)
2. What is the relationship between the amount of time lost and the filing/prevailing/results of state compensation and/or civil rights claims?

Relationship between year lost and amount of recovery

> recovery <- Crime$Amount...39

> yearlost <- Crime$`Years Lost`

> head(df\_recovery\_yearlost)

recovery yearlost

1 0 1.7

2 0 0.1

3 0 19.5

4 0 0.0

5 0 2.6

6 0 5.7

> df\_recovery\_yearlost <- data.frame(recovery, yearlost)

> df\_recovery\_yearlost <- na.omit(df\_recovery\_yearlost)

> df\_recovery\_yearlost <- df\_recovery\_yearlost %>% filter(recovery > 0)

> df\_recovery\_yearlost <- df\_recovery\_yearlost %>% filter(recovery != "unknown")

> df\_recovery\_yearlost <- df\_recovery\_yearlost %>% filter(recovery != "Undisclosed")

> df\_recovery\_yearlost <- df\_recovery\_yearlost %>% filter(recovery != "see above")

> df\_recovery\_yearlost <- df\_recovery\_yearlost %>% filter(recovery != "uknown")

> recovery1 <- df\_recovery\_yearlost$recovery

> yearlost1 <- df\_recovery\_yearlost$yearlost

> set.seed(123)

> sample <- sample(c(TRUE, FALSE), nrow(df\_recovery\_yearlost), replace = T, prob = c(0.6,.04))

> train <- df\_recovery\_yearlost[sample, ]

> test <- df\_recovery\_yearlost[!sample, ]

> summary(model\_recovery\_yearlost)

Call:

lm(formula = recovery1 ~ yearlost1, data = train)

Residuals:

Min 1Q Median 3Q Max

-8406266 -2455193 -746459 1302907 20739319

Coefficients:

Estimate Std. Error t value Pr(>|t|)

(Intercept) 594365 397076 1.497 0.135

yearlost1 268994 26848 10.019 <2e-16 \*\*\*

---

Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 4317000 on 401 degrees of freedom

Multiple R-squared: 0.2002, Adjusted R-squared: 0.1982

F-statistic: 100.4 on 1 and 401 DF, p-value: < 2.2e-16