

Graham Galloway's DH 100 Project

How true are the claims made by the Recall Chesa Boudin Campaign?

A look into San Francisco's District Attorney's Office: 2019-Present

Using publicly available data from <https://data.sfgov.org/>

For my project I am focusing on crime and justice data for the city of San Francisco

▼ The Backstory:

In late 2019, Chesa Boudin won the race for District Attorney in San Francisco

Boudin supports restorative justice and vowed to fight against mass incarceration

After assuming office on January 8, 2020, Boudin quickly became the subject of criticism

Critics blamed Boudin for what they saw as a rise in crime in the city

They claim the DA is letting crime go unanswered and that the city has become "lawless"

A campaign to recall Boudin emerged based on these claims

As an advocate for restorative justice myself I wanted to test the accuracy of their claims

The Claims:

1: Crime has increased in San Francisco since Boudin assumed office and it is a less safe place to live than it was before

2: Boudin is letting criminals go free and not pursuing charges

3: San Francisco has been getting more dangerous than other similarly sized cities

The Methods:

San Francisco has a plethora of publicly available data on crime and policing

To keep things simple for this brief class, I will be focusing on data from the year before Boudin took office and the time since, so January 2019 - June 2021

I have to consider critical crime theory when assessing this data. Questions like "What constitutes a crime?", "Who gets arrested or charged for crimes?", "What do police look for when documenting crime?" will help me better understand the biases that affect this data.

The Prosecutorial Process:

Going into this project it's very important to describe the difference between the police and the District Attorney.

Here I'll describe the process and steps that go into criminal prosecution. Once a crime is committed (or suspected), usually the police are called. This data is recorded as "Police Department Calls for Service", or "Calls" for the sake of this project. These calls include the location of the crime, a description, and the date and time of the call.

If the police determine a crime was committed, they file an incident report and it is officially documented. I will call these reports simply "Reports". These reports include a description of the crime or crime ID number, the location, the date and time, and whether a perpetrator was confronted or arrested. For many police incidents, no perpetrator is found and no arrests are made.

If an arrest is made, the police are responsible for charging the suspect with a crime, which requires probable cause. The police are then responsible for building a case against the subject, which they present to the District Attorney's office. The District Attorney is then responsible for pursuing these charges and prosecuting the suspect in court. The DA can choose to pursue a case, drop charges, or present the case to a different office (such as a state Attorney General, federal, etc.). An incoming DA inherits incomplete cases from the previous DA. For this reason, there are often more cases presented to a DA than arrests made for a given year.

Once a case goes to trial, the defendant is either found guilty, found innocent, or the case is dropped. Trials can take up to years to complete.

The DA has no control over the police or enforcing laws, only prosecuting suspects in criminal court.

Let's jump in!

The Data:

I will be using data from each step of the prosecutorial process. In addition, I will be comparing homicide rates between San Francisco and other similarly sized cities in the US. All data is available in .csv format.

All San Francisco data comes from data.sf.gov

US Homicide data comes from city police websites and the FBI. Sources for each city are recorded in the .csv file

My data includes:

Police Department calls for Service from 2019 - 2021 "calls"

Police Department Incident Reports from 2019 - 2021 "reports"

Arrests Made by the Police presented to the DA from 2019 - 2021 "arrests"

Cases Presented to the DA from 2019 - 2021 "cases"

District Attorney's Trial Outcomes from 2019 - 2021 "trials"

Homicide Data from 38 Largest US cities (population 250,000 or more) 2019/2020 "cities"

▼ On to the coding!

```
## Let's import some libraries!
## I'm going to use numpy, pandas, matplotlib, and seaborn
import numpy as np

import pandas as pd

import matplotlib

import matplotlib.pyplot as plt

%matplotlib inline

plt.style.use('seaborn-bright')

import seaborn as sns

## Lets check my working directory

%pwd

'/Users/grahamgalloway/Desktop/Digital_Humanities_Project/Notebooks'

## OK, time to import my files with pandas!
calls = pd.read_csv("../Data/Police_Department_Calls_for_Service_2019-2021.csv", sep = ",")

reports = pd.read_csv("../Data/Police_Department_Incident_Report_2019-2021_Updated.csv", sep = ",")

arrests = pd.read_csv("../Data/Arrests_Presented_and_Prosecutions_2019-2021.csv", sep = ",")
```

```
cases = pd.read_csv("../Data/District Attorney Incoming Caseload 2019-2021.csv", sep = ",")  
trials = pd.read_csv("../Data/District Attorney Trials 2019-2021.csv", sep = ",")  
cities = pd.read_csv("../Data/2020 Statistics Homicides Majorcities.csv", sep = ",")  
  
from PIL import Image  
busted = Image.open("../Images/busted.jpg");  
plausible = Image.open("../Images/plausible.jpg")
```

OK. Let's get a look at how these categories all compare. How many 911 calls end up going to trial? Let's go step by step by analyzing the row count for each file.

```
# How many times were the police called between Jan 1, 2019 and June 2021?  
# Each call is recorded in a row: Here's what the data looks like
```

```
reports
```

	Incident Datetime	Incident Date	Incident Time	Incident Year	Incident Day of Week	Report Datetime	Row ID
0	2019/01/01 12:01:00 AM	2019/01/01	00:01	2019	Tuesday	2021/02/09 02:19:00 PM	100392509027
1	2019/01/01 12:01:00 AM	2019/01/01	00:01	2019	Tuesday	2019/06/20 10:10:00 PM	81382074000
2	2019/01/01 12:01:00 AM	2019/01/01	00:01	2019	Tuesday	2019/03/28 08:00:00 AM	78436868030

2019/01/01 2019/01/01

len(calls)

1801541

4 12:01:00 2019/01/01 00:01 2019 Tuesday 10:30:00 //243/68030

Wow, 1,801,541 calls to police. So how many times did the police file an incident report?

len(reports)

321868

1111

1111

(len(reports))/(len(calls))

0.178662600518112

...
...

...
...

Only ~17.9% of 911 calls end up as recorded "incidents"

How many of those police incidents lead to arrests?

len(arrests)

9608

1111

1111

Rinse, repeat

(len(arrests))/(len(reports))

0.029850746268656716

1111

1111

And now what percent of 911 calls is this?

(len(arrests))/(len(calls))

0.005333211955764537

```
# Wow, so only ~3% of police incidents where a crime takes place end in an arrest, why?  
# How many of those arrests are presented to the DA?
```

```
len(cases)
```

```
14553
```

```
# Hmm, that doesn't make sense? Why is the number larger? Oh yes, that's right. DA cases  
# Let's look at the number of trials
```

```
len(trials)
```

```
271
```

```
# Wow! Only 271. Let's look a little closer
```

```
trials
```

	ID	Court Number 1	Court Number 2	Court Number 3	Court Number 4	Case Type	Jury Sworn Date	Trial End Date	Defen
0	1263	18013240	NaN	NaN	NaN	Felony	2019/01/02	2019/01/08	
1	1266	18013592	NaN	NaN	NaN	Misdemeanor	2019/01/04	2019/01/14	
2	1267	17008515	NaN	NaN	NaN	Felony	2019/01/04	2019/01/16	
3	1265	18008255	NaN	NaN	NaN	Misdemeanor	2019/01/08	2019/01/14	
4	1268	16008618	NaN	NaN	NaN	Misdemeanor	2019/01/09	2019/01/16	
...
266	1530	20001414	NaN	NaN	NaN	Felony	2020/10/15	2020/10/28	
267	1532	20007148	NaN	NaN	NaN	Felony	2021/01/27	2021/02/24	
268	1533	19016394	NaN	NaN	NaN	Felony	2021/02/23	2021/03/23	
269	1534	20008566	NaN	NaN	NaN	Felony	2021/03/17	2021/04/12	
270	1535	20009124	NaN	NaN	NaN	Felony	2021/04/12	2021/05/03	

```
271 rows × 14 columns
```

```
# As we can see in the "Trial Outcome" column, only some trials end in convictions. Let's take a look.
```

```
trials.value_counts("Trial Outcome")
```

Trial Outcome	Count
Convicted	185
Not Convicted	87

```
Not Convicted      45  
Mistrial          41  
dtype: int64
```

```
# How long is the average trial?  
  
trials['Trial Length Days'] = trials['Trial Length Days'].astype(int)  
  
trials["Trial Length Days"].mean()  
  
12.339483394833948
```

So, between Jan 1, 2019 and June 2021, over 1,800,000 calls to 911 end up with only 185 convictions.

```
## What percentage of 9/11 calls in SF end with a conviction?  
  
185/len(calls)  
  
0.00010268986384434215
```

Only .01% of calls to 911 end with a criminal conviction. This is from a data set that includes one year before Boudin took office and the year and a half since. Let's compare those years.

```
#first I'm going to split my datasets by year  
  
import datetime as dt  
  
calls['Report Date'] = pd.to_datetime(calls['Report Date'])  
  
calls2019 = calls[calls['Report Date'].dt.year == 2019]  
calls2020 = calls[calls['Report Date'].dt.year == 2020]  
calls2021 = calls[calls['Report Date'].dt.year == 2021]  
  
reports['Incident Date'] = pd.to_datetime(reports['Incident Date'])  
  
reports2019 = reports[reports['Incident Date'].dt.year == 2019]  
reports2020 = reports[reports['Incident Date'].dt.year == 2020]  
reports2021 = reports[reports['Incident Date'].dt.year == 2021]  
  
arrests["Arrest Date"] = pd.to_datetime(arrests["Arrest Date"])  
  
arrests2019 = arrests[arrests["Arrest Date"].dt.year == 2019]  
arrests2020 = arrests[arrests["Arrest Date"].dt.year == 2020]  
arrests2021 = arrests[arrests["Arrest Date"].dt.year == 2021]
```

```

cases["Arrest Date"] = pd.to_datetime(cases["Arrest Date"])

cases2019 = cases[cases["Arrest Date"].dt.year == 2019]
cases2020 = cases[cases["Arrest Date"].dt.year == 2020]
cases2021 = cases[cases["Arrest Date"].dt.year == 2021]

trials["Jury Sworn Date"] = pd.to_datetime(trials["Jury Sworn Date"])

trials2019 = trials[trials["Jury Sworn Date"].dt.year == 2019]
trials2020 = trials[trials["Jury Sworn Date"].dt.year == 2020]
trials2021 = trials[trials["Jury Sworn Date"].dt.year == 2021]

```

Ok. Now we have all our datasets split up by year. Lets compare!

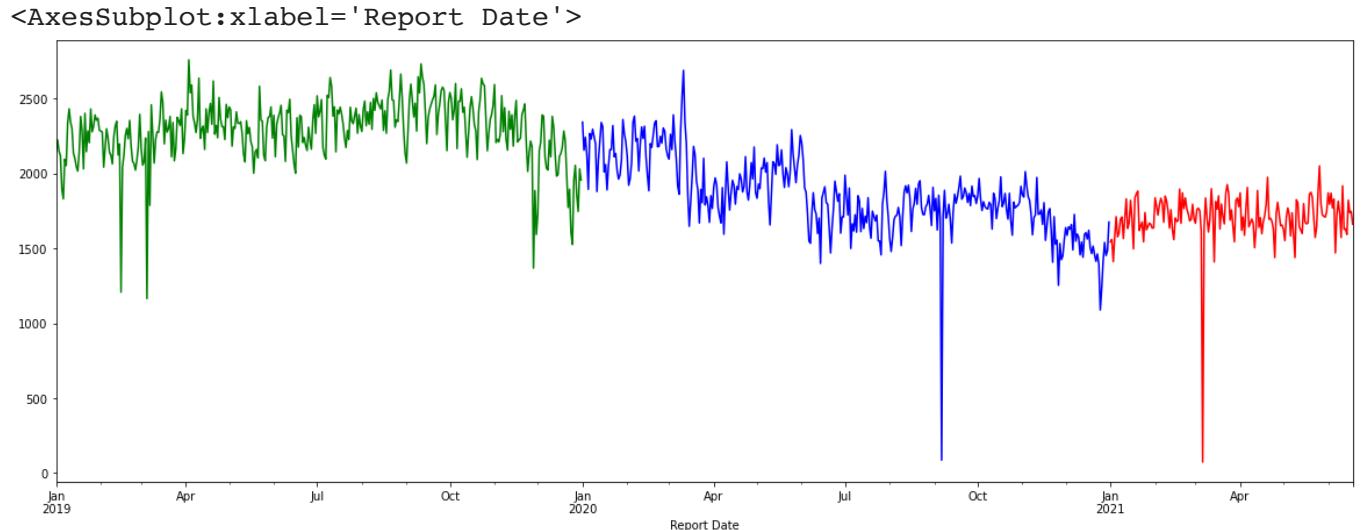
▼ Lets graph!

Here we can see 911 calls over time. Calls are steady in 2019, but drop off pretty significantly in March, coinciding with the start of lockdown.

```

calls2019.groupby(calls2019['Report Date']).size().plot(figsize = (20,7), color = ('green'))
calls2020.groupby(calls2020['Report Date']).size().plot(figsize = (20,7), color = ('blue'))
calls2021.groupby(calls2021['Report Date']).size().plot(figsize = (20,7), color = ('red'))

```

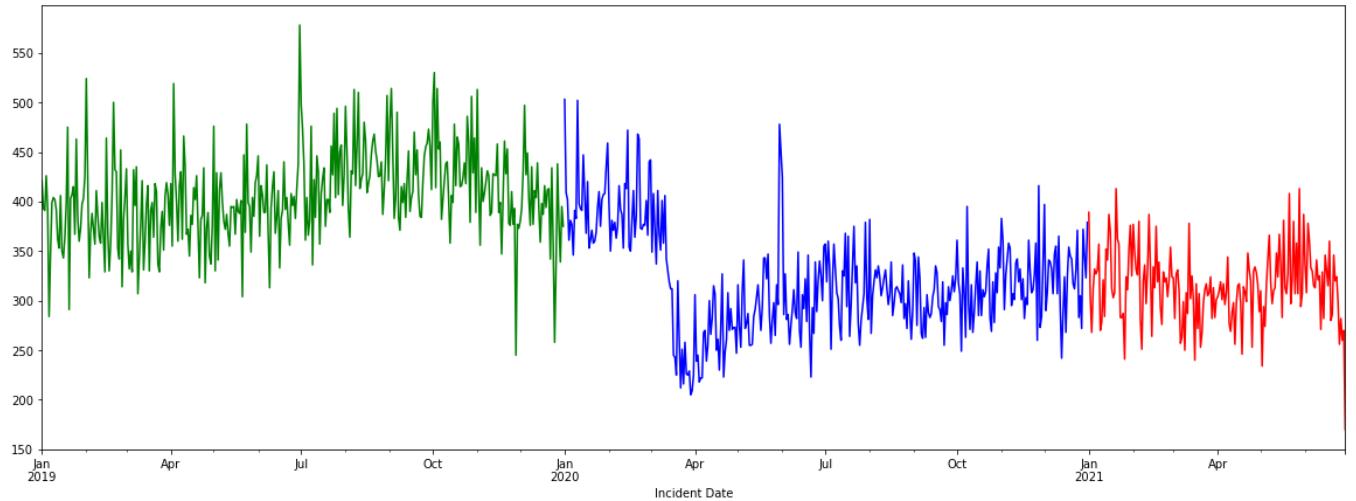


▼ Police Incident Reports

Here we see a similar trend. Incident reports remain steady through 2019 and into 2021, dropping sharply in April. Despite 911 calls decreasing consistently through 2020, police incident reports start to increase before leveling off

```
reports2019.groupby(reports2019['Incident Date']).size().plot(figsize = (20,7), color  
reports2020.groupby(reports2020['Incident Date']).size().plot(figsize = (20,7), color  
reports2021.groupby(reports2021['Incident Date']).size().plot(figsize = (20,7), color
```

```
<AxesSubplot:xlabel='Incident Date'>
```

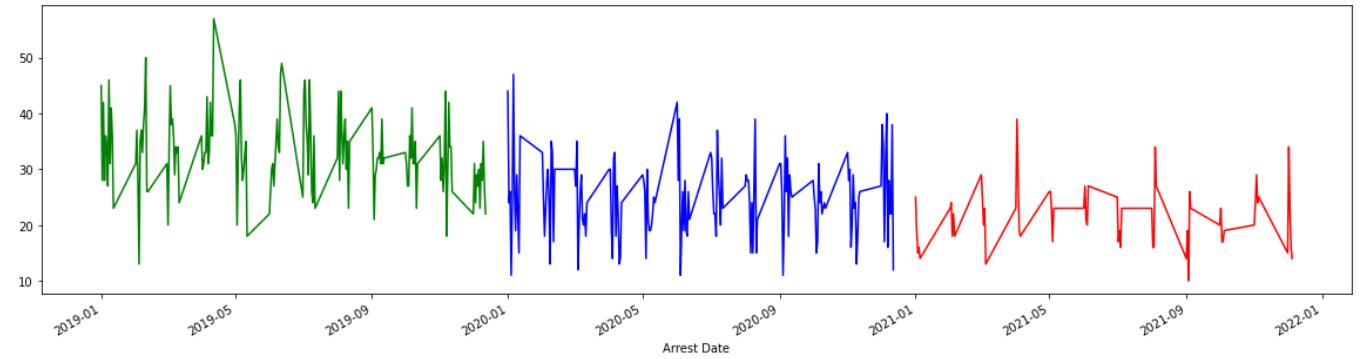


▼ Arrests

Ok, this graph is pretty jagged because of the daily data, but it's pretty clear that arrests have decreased consistently since the start of 2020.

```
arrests2019.groupby(arrests2019['Arrest Date']).size().plot(figsize = (20,5), color =  
arrests2020.groupby(arrests2020['Arrest Date']).size().plot(figsize = (20,5), color =  
arrests2021.groupby(arrests2021['Arrest Date']).size().plot(figsize = (20,5), color =
```

```
<AxesSubplot:xlabel='Arrest Date'>
```

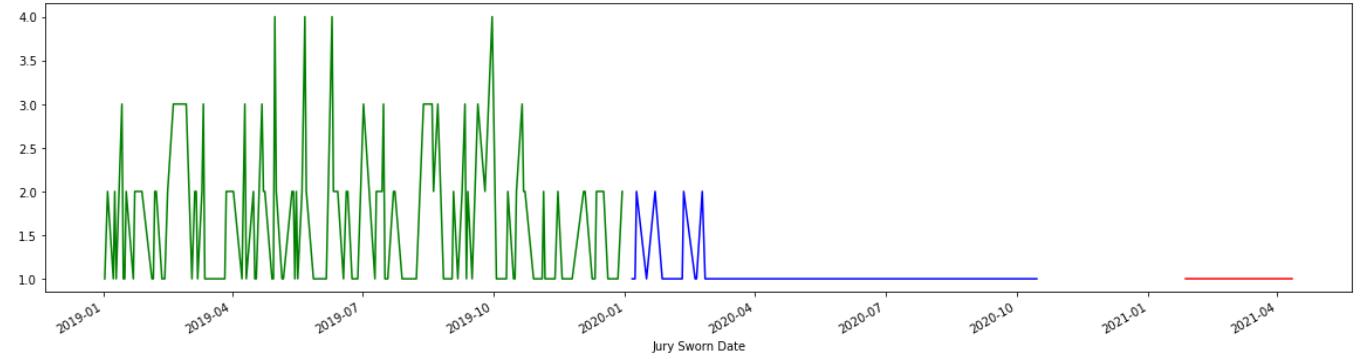


▼ Trials

Ok, there's so little data here to work with, but it looks like trials stopped almost completely when COVID hit, shortly after Boudin took office.

```
trials2019.groupby(trials2019['Jury Sworn Date']).size().plot(figsize = (20,5), color  
trials2020.groupby(trials2020['Jury Sworn Date']).size().plot(figsize = (20,5), color  
trials2021.groupby(trials2021['Jury Sworn Date']).size().plot(figsize = (20,5), color
```

```
<AxesSubplot:xlabel='Jury Sworn Date'>
```



```
len(trials2019)
```

```
len(trials2020)
```

29

```
(len(trials2020))/len(trials2019)
```

0.12184873949579832

Looks like trials in 2020 were only 12% of the trials in 2019.

▼ Types of Crime

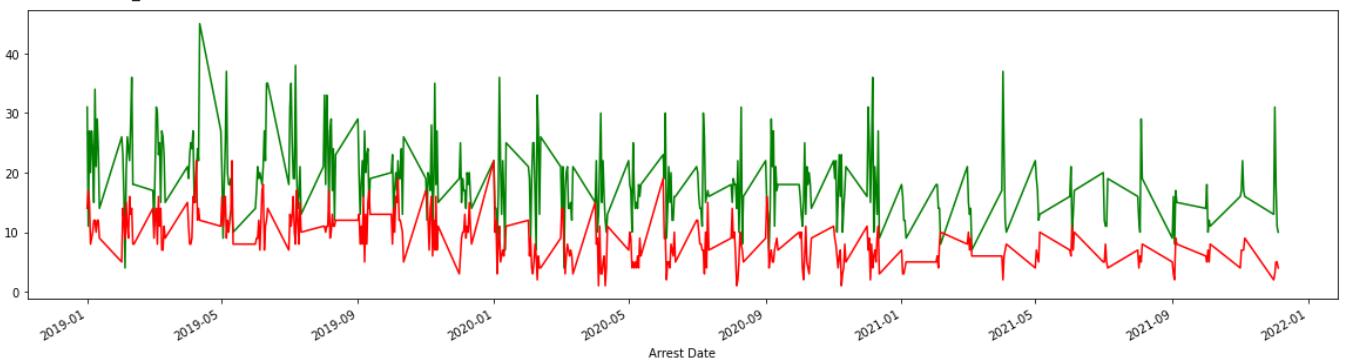
Not all crimes are equal. Violent crime is much more frightening than property crime. Felonies are worse than misdemeanors. Lets look at how different crimes compare over time.

Here I'm going to look at arrests for Felonies vs Misdemeanors

```
arrestsf = arrests[arrests['Case Type'].str.contains("Felony")]
arrestsm = arrests[arrests['Case Type'].str.contains("Misdemeanor")]
```

```
arrestsf.groupby(arrestsf['Arrest Date']).size().plot(figsize = (20,5), color = ('green'))
arrestsm.groupby(arrestsm['Arrest Date']).size().plot(figsize = (20,5), color = ('red'))
```

```
<AxesSubplot:xlabel='Arrest Date'>
```



Well, looks like both felony and misdemeanor arrests declined slightly since the beginning of 2020. Fewer arrests were made for misdemeanors than felonies.

Lets look at property vs nonviolent crime.

Here are the different categories for crime and the amounts of each. Lets split our police reports up into violent vs nonviolent crime. I will not be including more minor "victimless" crimes such as "Non-Criminal", "Lost Property", "Drug Offenses", etc.

```
reports.value_counts("Incident Category")
```

Incident Category	
Larceny Theft	94163
Other Miscellaneous	23131
Malicious Mischief	22322
Burglary	19571
Non-Criminal	19523
Assault	19361
Motor Vehicle Theft	16688
Recovered Vehicle	12856
Warrant	9955
Fraud	9519
Lost Property	8916
Robbery	7469
Drug Offense	7422
Missing Person	6943
Suspicious Occ	6648
Disorderly Conduct	5514
Offences Against The Family And Children	4554
Traffic Violation Arrest	3459
Miscellaneous Investigation	3126
Other	2890
Other Offenses	2882
Weapons Offense	2221
Weapons Carrying Etc	1825
Stolen Property	1718
Case Closure	1328
Forgery And Counterfeiting	1152
Arson	969
Courtesy Report	911
Traffic Collision	753
Vandalism	708
Prostitution	484
Fire Report	452
Embezzlement	414
Civil Sidewalks	365
Sex Offense	365
Vehicle Impounded	245
Suicide	158
Vehicle Misplaced	129
Drug Violation	102
Rape	70
Suspicious	52
Homicide	35
Motor Vehicle Theft?	32
Human Trafficking (A), Commercial Sex Acts	28
Liquor Laws	17
Human Trafficking, Commercial Sex Acts	14
Weapons Offence	14

```
Gambling  
dtype: int64
```

8

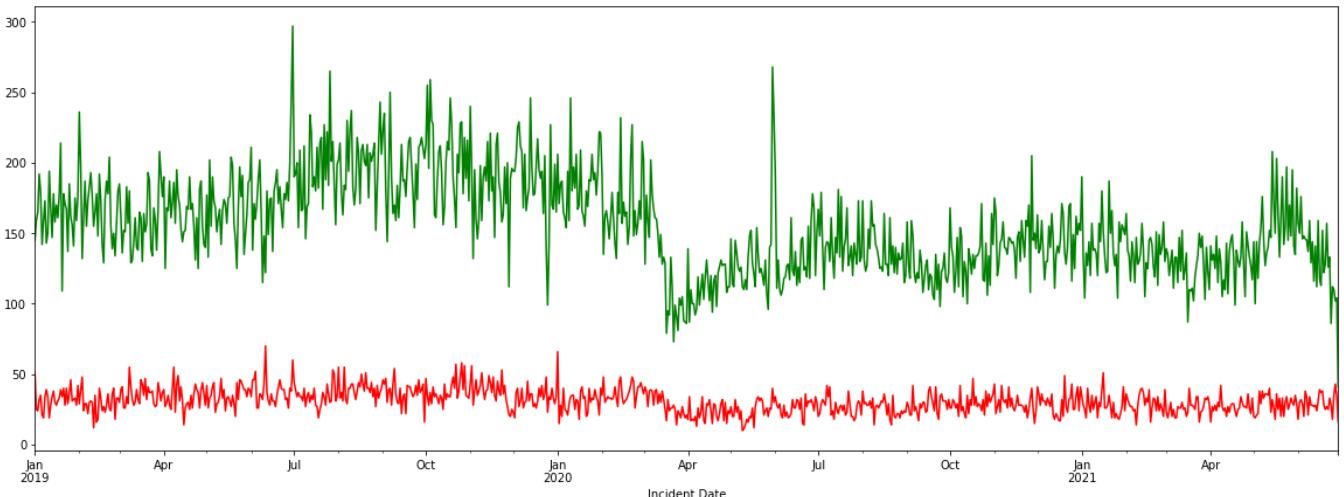
Lets split them into two new dataframes

```
reportsproperty = reports[reports['Incident Category'].str.contains('Theft|Burglary|St  
reportsviolent = reports[reports['Incident Category'].str.contains('Assault|Roberby|Ai
```

And lets graph a timeline!

```
reportsproperty.groupby(reportsproperty['Incident Date']).size().plot(figsize = (20,7),  
reportsviolent.groupby(reportsviolent['Incident Date']).size().plot(figsize = (20,7),
```

```
<AxesSubplot:xlabel='Incident Date'>
```

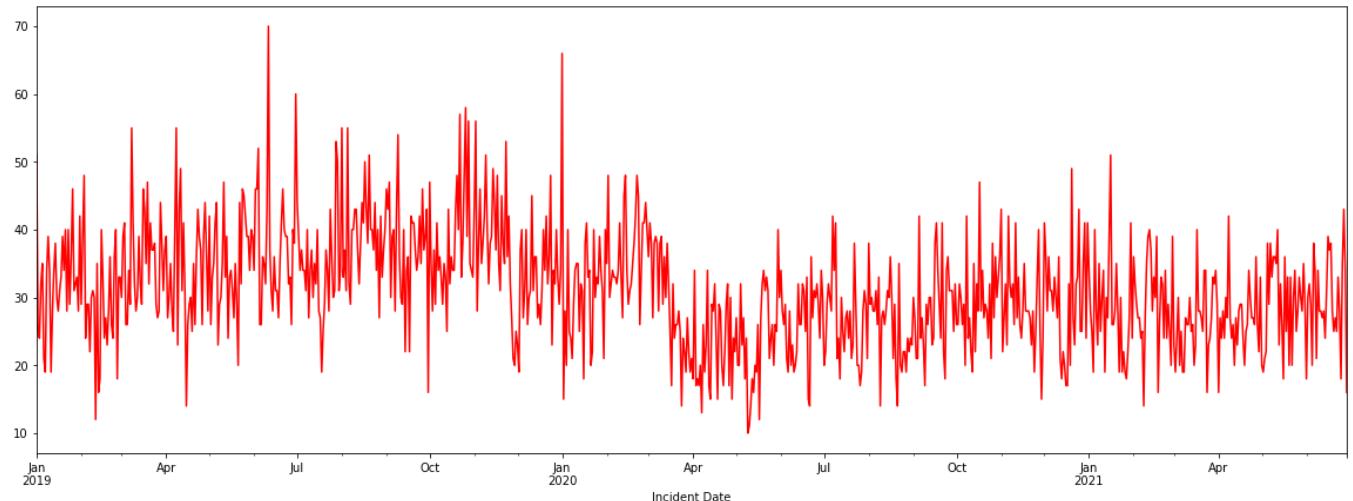


▼ All Crime has decreased.

Well, it looks like contrary to the Recall Chesa Boudin team, both violent and property crime have dropped since the start of 2020. Both have stayed consistently lower. Lets take a better look at violent crime

```
reportsviolent.groupby(reportsviolent['Incident Date']).size().plot(figsize = (20,7),
```

<AxesSubplot:xlabel='Incident Date'>



The change is pretty clear, though it does seem we are creeping back up to 2019 levels.

Here you can see the decrease much more clearly. Lets look at the raw numbers.

```
# Lets split police reports by year again, but this time for violent vs property

reportsviolent2019 = reportsviolent[reportsviolent['Incident Date'].dt.year == 2019]
reportsviolent2020 = reportsviolent[reportsviolent['Incident Date'].dt.year == 2020]
reportsviolent2021 = reportsviolent[reportsviolent['Incident Date'].dt.year == 2021]

# How many violent crimes total for 2019?

len(reportsviolent2019)

12909

# And What about 2020?

len(reportsviolent2020)

10331
```

```
# And 2021 so far?
```

```
len(reportsviolent2021)
```

```
5071
```

So there were more than 2,000 fewer violent crimes in 2020. So far we are 6 months into 2021 and not yet at 50% of the number of violent crimes as 2019 as well. Looks like violent crim has NOT increased since Boudin took office.

```
(len(reportsviolent2020))/(len(reportsviolent2019))
```

```
0.8002943682701991
```

In fact, violent crime for 2020 was 80% of violent crime in 2019.

Lets look at property crime.

```
reportsproperty2019 = reportsproperty[reportsproperty['Incident Date'].dt.year == 2019]
reportsproperty2020 = reportsproperty[reportsproperty['Incident Date'].dt.year == 2020]
reportsproperty2021 = reportsproperty[reportsproperty['Incident Date'].dt.year == 2021]
```

```
len(reportsproperty2019)
```

```
65723
```

```
len(reportsproperty2020)
```

```
51376
```

```
len(reportsproperty2021)
```

```
24592
```

Property crime has also decreased! And again we are not at 50 percent of 2019 crime levels despite being halfway through the year.

```
(len(reportsproperty2020))/(len(reportsproperty2019))
```

```
0.7817050347671287
```

Property crime for 2020 is only 78% of what it was for 2019

▼ Claim 1: BUSTED

busted



Crime has NOT increased since Boudin has taken office. In fact, both violent and property crime FELL since he took office.

Now on to claim number 2 about Boudin not pursuing charges. We saw that there were fewer trials, but is that the whole picture? We need to look at the outcomes of arrests presented to the DA.

```
# The arrests file contains data information as to whether charges were dismissed or filed  
# Lets look at it by year, just like the other categories  
  
arrests2019filed = arrests2019[arrests2019['Status'].str.contains('Filed', na=False)]  
arrests2020filed = arrests2020[arrests2020['Status'].str.contains('Filed', na=False)]  
arrests2021filed = arrests2021[arrests2021['Status'].str.contains('Filed', na=False)]
```

```
# Lets compare total arrests for 2019 and 2020 again  
len(arrests2019)
```

```
4737
```

```
len(arrests2020)
```

```
3578
```

```
(len(arrests2020))/(len(arrests2019))
```

```
0.755330377876293
```

So 2020 had 75.5% of arrests presented to the DA compared to 2019. Now lets compare filing percentage for each year

```
len(arrests2019filed)/len(arrests2019)
```

```
0.5214270635423264
```

```
len(arrests2020filed)/len(arrests2020)
```

```
0.4762437115707099
```

```
len(arrests2021filed)/len(arrests2021)
```

```
0.5460170146945089
```

So the DA's filing rate for 2019 was ~52.1%

In 2020 it was ~47.6%, or about 4.5% lower than 2020

In 2021 so far, however, the rate increased to ~54.6%, an increase of ~7% since 2020 and higher than 2019.

Lets compare felonies to misdemeanors. This might get a bit messy with the variables.

```
arrests2019f = arrests2019[arrests2019['Case Type'].str.contains('Felony', na=False)]  
arrests2020f = arrests2020[arrests2020['Case Type'].str.contains('Felony', na=False)]  
arrests2021f = arrests2021[arrests2021['Case Type'].str.contains('Felony', na=False)]
```

```
arrests2019filedf = arrests2019filed[arrests2019filed['Case Type'].str.contains('Felony', na=False)]  
arrests2020filedf = arrests2020filed[arrests2020filed['Case Type'].str.contains('Felony', na=False)]  
arrests2021filedf = arrests2021filed[arrests2021filed['Case Type'].str.contains('Felony', na=False)]
```

```
arrests2019m = arrests2019[arrests2019['Case Type'].str.contains('Misdemeanor', na=False)]  
arrests2020m = arrests2020[arrests2020['Case Type'].str.contains('Misdemeanor', na=False)]  
arrests2021m = arrests2021[arrests2021['Case Type'].str.contains('Misdemeanor', na=False)]
```

```
arrests2020m = arrests2020[arrests2020['Case Type'].str.contains('Misdemeanor', na=False)]
arrests2021m = arrests2021[arrests2021['Case Type'].str.contains('Misdemeanor', na=False)]

arrests2019filedm = arrests2019filed[arrests2019filed['Case Type'].str.contains('Misdemeanor', na=False)]
arrests2020filedm = arrests2020filed[arrests2020filed['Case Type'].str.contains('Misdemeanor', na=False)]
arrests2021filedm = arrests2021filed[arrests2021filed['Case Type'].str.contains('Misdemeanor', na=False)]

# What percentage of felonies were prosecuted in 2019?

len(arrests2019filedf)/len(arrests2019f)

0.5689092096668844

# And 2020?

len(arrests2020filedf)/len(arrests2020f)

0.490987460815047

# What about 2021?

len(arrests2021filedf)/len(arrests2021f)

0.5808189655172413
```

Again, we see the rate go down for 2020, but back up again for 2021. How about misdemeanors?

```
len(arrests2019filedm)/len(arrests2019m)

0.43462686567164177

len(arrests2020filedm)/len(arrests2020m)

0.4395711500974659

len(arrests2021filedm)/len(arrests2021m)

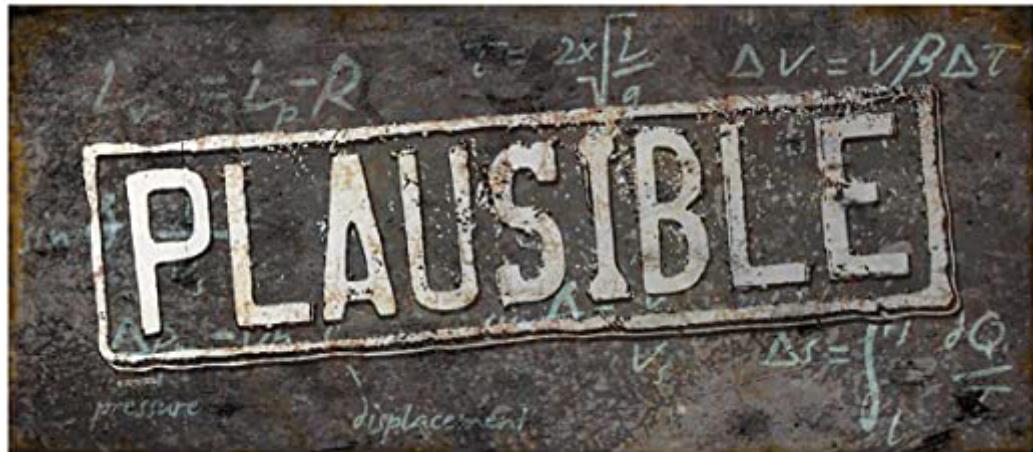
0.4575342465753425
```

Hmmmmm. Looks like the rate for prosecuting misdemeanors actually increases for each year.

This data is less conclusive. For 2020 it's pretty clear that Boudin pursued a smaller percentage of cases than his predecessor and 2021 isn't over, so I'm going to leave this one open.

▼ Claim 2: PLAUSIBLE

plausible



Now on to the 3rd and final claim! How does San Francisco compare to other cities? For this category I decided to limit my scope to strictly homicides, because I didn't want to spend all my life parsing through other cities' police data and homicide information was easily available.

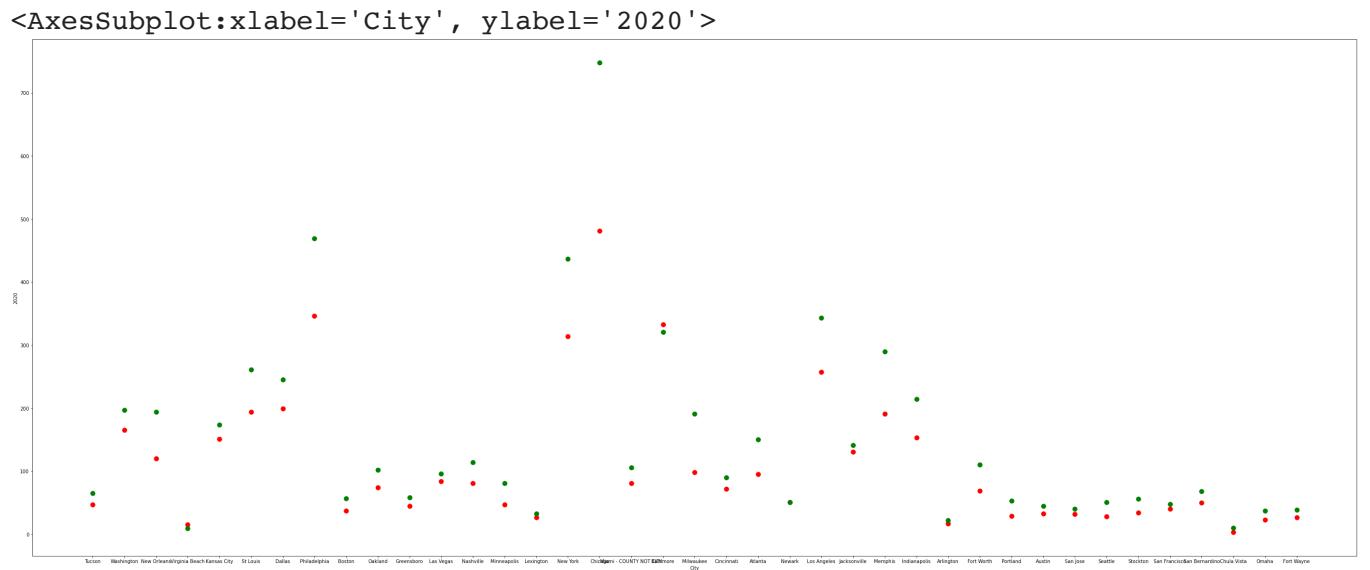
Lets take a look

cities

	City	2020	2019	Source
0	Tucson	65	47	https://qlikapps.tucsonaz.gov/sense/app/be0461...
1	Washington	197	165	http://mpdc.dc.gov/page/district-crime-data-gl...
2	New Orleans	194	120	https://council.nola.gov/committees/criminal-j...
3	Virginia Beach	9	15	https://eprodmz.vbgov.com/MainUI/Crimes/CrimeS...
4	Kansas City	174	151	http://kcpd.org/crime/crime-statistics/
5	St Louis	261	194	http://www.slpmpd.org/crime_stats.shtml
6	Dallas	245	199	http://www.dallaspolice.net/resources/CrimeRep...
7	Philadelphia	469	346	https://drive.google.com/drive/folders/1eo4BIO...
8	Boston	57	37	https://bpnews.com/?category=Crime+Stats
9	Oakland	102	74	https://www.oaklandca.gov/services/police-depa...
10	Greensboro	58	45	https://www.greensboro-nc.gov/departments/poli...
11	Las Vegas	96	84	https://www.lvmpd.com/en-us/Pages/Statistics.aspx
12	Nashville	114	81	https://www.nashville.gov/Police-Department/Ex...
13	Minneapolis	81	47	https://tableau.minneapolismn.gov/views/MPDMSt...
14	Lexington	33	27	https://www.lexingtonky.gov/homicide-investiga...
15	New York	437	314	https://compstat.nypdonline.org/
16	Chicago	748	481	http://home.chicagopolice.org/online-services/...
17	Miami - COUNTY NOT CITY	106	81	https://www.miamidade.gov/police/library/part-...
18	Baltimore	321	333	https://data.baltimorecity.gov/Public-Safety/S...
19	Milwaukee	191	98	https://projects.jsonline.com/apps/Milwaukee-H...
20	Cincinnati	90	72	https://cincinnati-oh.gov/police/crime-statist...
21	Atlanta	150	95	http://www.atlantapd.org/i-want-to/crime-data-...
22	Newark	51	51	http://npd.newarkpublicsafety.org/comstat
23	Los Angeles	343	257	http://assets.lapdonline.org/assets/pdf/citypr...

```
ax = plt.gca()
```

```
cities.plot(kind='scatter',x='City',y='2019', color='red', ax=ax, s = 90, figsize = (5,5))
cities.plot(kind='scatter',x='City',y='2020',color = 'green', ax=ax, s = 90, figsize = (5,5))
```



Ok, I know that's hard to see, but the green represents homicides in 2020 and the red represents homicides in 2019.

Across the board homicides are up in 2020.

Lets look at the comparison between 2020's averages and 2019's

```
cities["2020"].mean()/cities["2019"].mean()
```

```
1.3607861488067385
```

Ok, the 38 largest cities in the US averaged 36% more homicides in 2020 compared to 2019. What about SF?

48/40

1.2

San Francisco had 20% more homicides in 2020 compared to 2019.

While that is a large increase, it's actually lower than the average for large cities in America

▼ Claim 3: BUSTED

busted



