European Court of Human Rights case law analysis

TABLE OF CONTENTS

01

Introduction

02

Scraping Method

03

Results

04

Analysis

01

Introduction

Analysis of the case law of the European Court of Human Rights over time and according to the States involved and the rights violated

Approx. 25,000 decisions

02

Scraping method

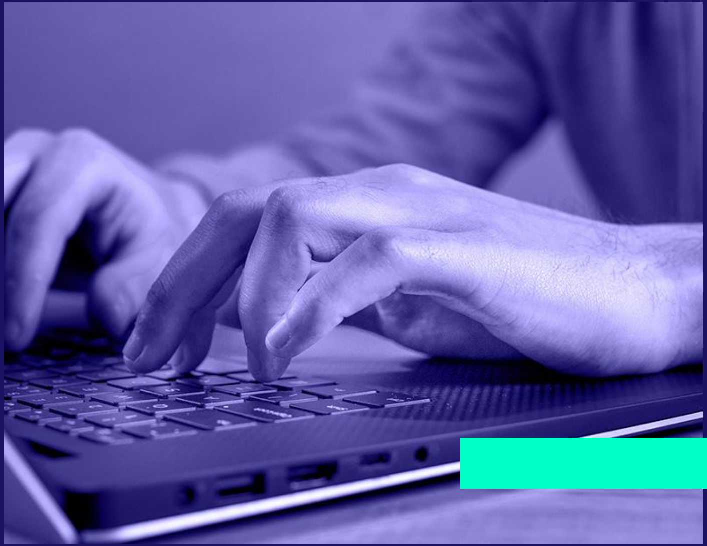
FOUR STEPS IN CODING

1) Get the cases filtered by languages

2) Get the page to scroll down

3) Check if the same case has already been processed

4) Extract the relevant information from each case



Step 1: Get the cases filtered by languages

How to get all the decisions without fail?

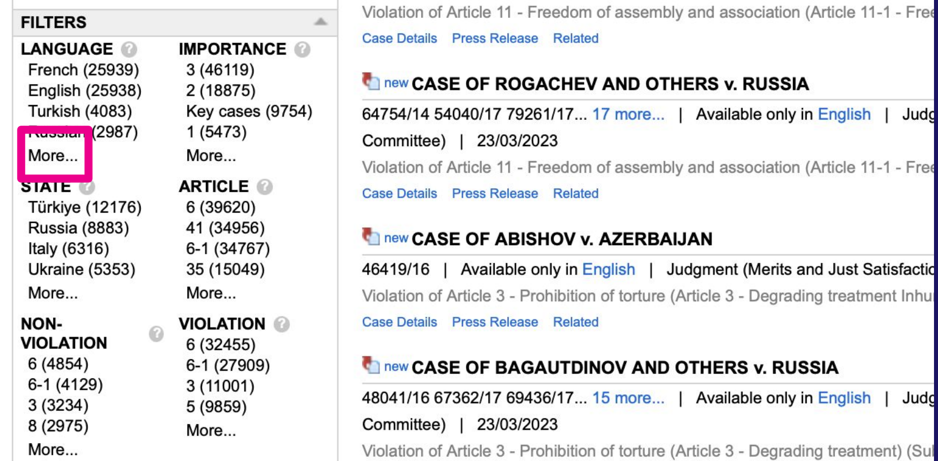
⇒ Subdivisions by loops

⇒ Potential criteria: dates or languages?

EXTRACT OF THE CODE

```
LANGUAGES_TO_PROCESS = ["english", "french", "not english french"]
```

CLICK ON THE RIGHT LANGUAGES



FILTERS

LANGUAGE
- French (25939)
- English (25938)
- Turkish (4083)
- Russian (2987)
- More...

STATE
- Türkiye (12176)
- Russia (8883)
- Italy (6316)
- Ukraine (5353)
- More...

NON-VIOLATION
- 6 (4854)
- 6-1 (4129)
- 3 (3234)
- 8 (2975)
- More...

IMPORTANCE
- 3 (46119)
- 2 (18875)
- Key cases (9754)
- 1 (5473)
- More...

ARTICLE
- 6 (39620)
- 41 (34956)
- 6-1 (34767)
- 35 (15049)
- More...

VIOLATION
- 6 (32455)
- 6-1 (27909)
- 3 (11001)
- 5 (9859)
- More...

Violation of Article 11 - Freedom of assembly and association (Article 11-1 - Free

Case Details Press Release Related

new **CASE OF ROGACHEV AND OTHERS v. RUSSIA**

64754/14 54040/17 79261/17... 17 more... | Available only in English | Judg

Committee) | 23/03/2023

Violation of Article 11 - Freedom of assembly and association (Article 11-1 - Free

Case Details Press Release Related

new **CASE OF ABISHOV v. AZERBAIJAN**

46419/16 | Available only in English | Judgment (Merits and Just Satisfactio

Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment Inhu

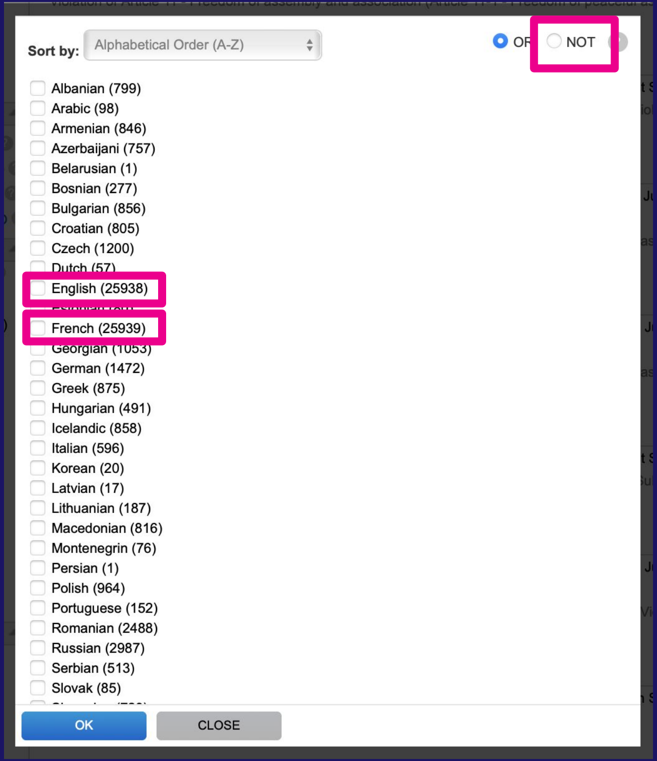
Case Details Press Release Related

new **CASE OF BAGAUTDINOV AND OTHERS v. RUSSIA**

48041/16 67362/17 69436/17... 15 more... | Available only in English | Judg

Committee) | 23/03/2023

Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment) (Su



Sort by: Alphabetical Order (A-Z) ● OR ○ NOT

- □ Albanian (799)
- □ Arabic (98)
- □ Armenian (846)
- □ Azerbaijani (757)
- □ Belarusian (1)
- □ Bosnian (277)
- □ Bulgarian (856)
- □ Croatian (805)
- □ Czech (1200)
- □ Dutch (57)
- □ English (25938)
- □ French (25939)
- □ Georgian (1053)
- □ German (1472)
- □ Greek (875)
- □ Hungarian (491)
- □ Icelandic (858)
- □ Italian (596)
- □ Korean (20)
- □ Latvian (17)
- □ Lithuanian (187)
- □ Macedonian (816)
- □ Montenegrin (76)
- □ Persian (1)
- □ Polish (964)
- □ Portuguese (152)
- □ Romanian (2488)
- □ Russian (2987)
- □ Serbian (513)
- □ Slovak (85)

OK CLOSE

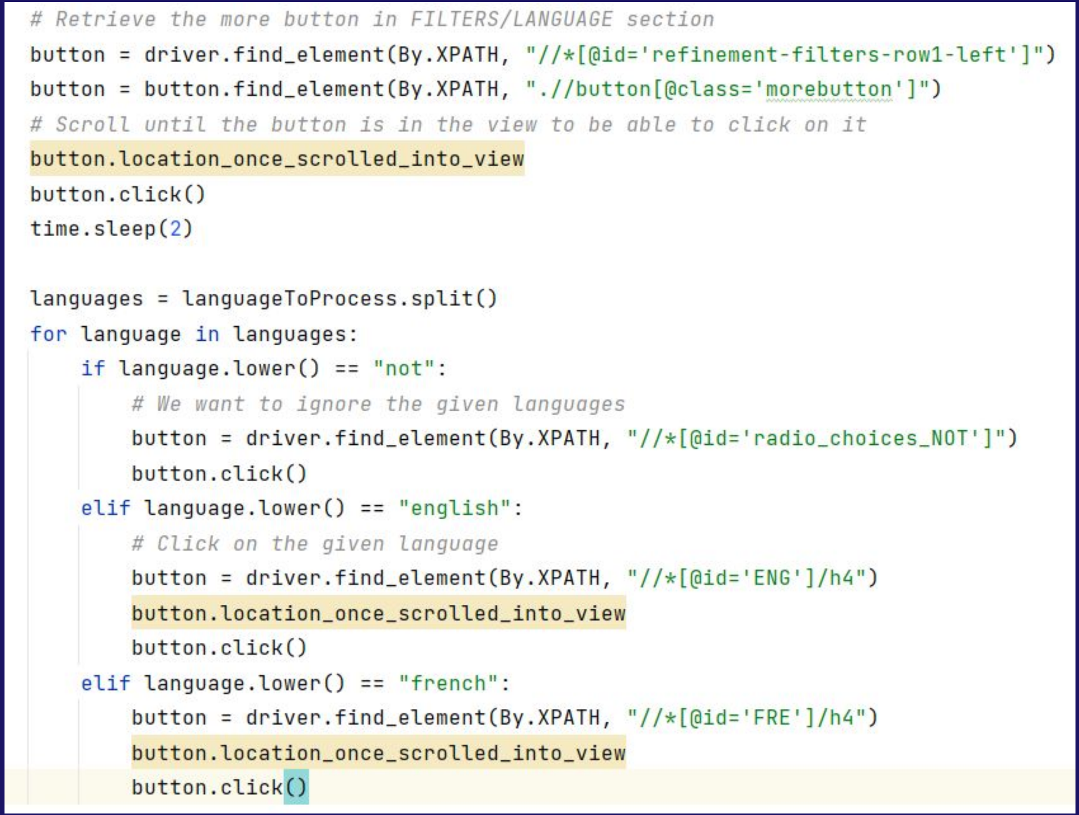
Three situations covered:

⇒ decisions in English;

⇒ decisions in French;

⇒ decisions neither in English nor in French.

CLICK ON THE RIGHT LANGUAGES



```python
# Retrieve the more button in FILTERS/LANGUAGE section
button = driver.find_element(By.XPATH, "//*[@id='refinement-filters-row1-left']")
button = button.find_element(By.XPATH, ".//button[@class='morebutton']")
# Scroll until the button is in the view to be able to click on it
button.location_once_scrolled_into_view
button.click()
time.sleep(2)

languages = languageToProcess.split()
for language in languages:
    if language.lower() == "not":
        # We want to ignore the given languages
        button = driver.find_element(By.XPATH, "//*[@id='radio_choices_NOT']")
        button.click()
    elif language.lower() == "english":
        # Click on the given language
        button = driver.find_element(By.XPATH, "//*[@id='ENG']/h4")
        button.location_once_scrolled_into_view
        button.click()
    elif language.lower() == "french":
        button = driver.find_element(By.XPATH, "//*[@id='FRE']/h4")
        button.location_once_scrolled_into_view
        button.click()
```

Step 2: Get the page to scroll down

How many scrolls do we need to get all the decisions displayed?

⇒ Define the **number of cases to get**:

```
nb_cases_to_get = int(soup.find("span", class_="resultNumber").contents[0])
```

⇒ Define the **number of cases displayed per scroll**:

```
nb_cases_per_scroll =
len(soup.find("div", class_="results-list-block").findChildren("div", title="Results"))
```

⇒ Define the **number of scroll needed**:

```
for x in range(int(nb_cases_to_get/nb_cases_per_scroll)+10):  # add a small margin
   driver.find_element(By.CSS_SELECTOR, "body").send_keys(Keys.CONTROL, Keys.END)
   time.sleep(0.5)
```

Step 3: Check if the same case has already been processed

1) Initialize a list: caseids.list
2) Add each case id in the list if it is not already present and process the case
3) Skip the entry if the case has already been processed

EXTRACT OF THE CODE

```
if caseid in caseids_list:
    continue  # Skip this entry, case already processed
```

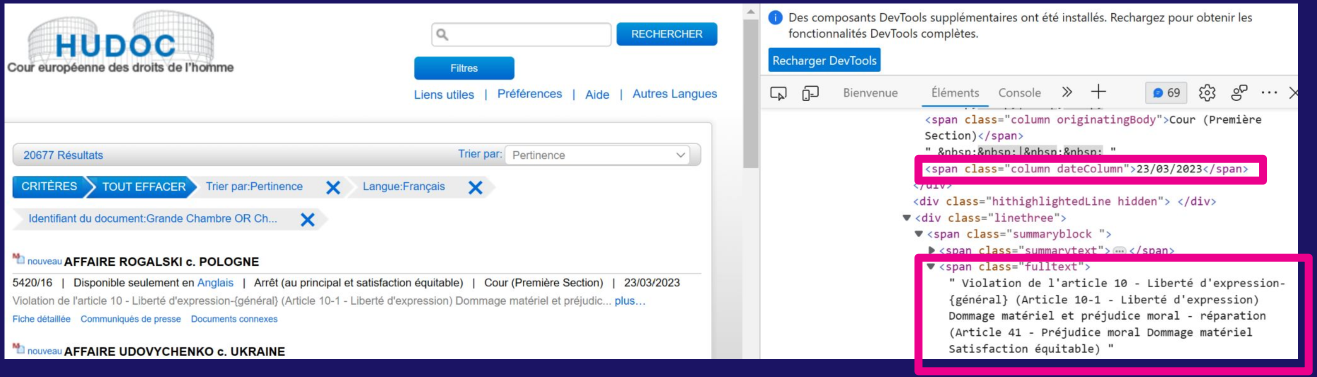
03

Results

Step 4: Extract the relevant information from each case

How to extract the useful information?

⇒ Find where the information is available



20677 Résultats

nouveau **AFFAIRE ROGALSKI c. POLOGNE**

5420/16 | Disponible seulement en Anglais | Arrêt (au principal et satisfaction équitable) | Cour (Première Section) | 23/03/2023

Violation de l'article 10 - Liberté d'expression-{général} (Article 10-1 - Liberté d'expression) Dommage matériel et préjudic... plus...

Fiche détaillée Communiqués de presse Documents connexes

nouveau **AFFAIRE UDOVYCHENKO c. UKRAINE**

Des composants DevTools supplémentaires ont été installés. Rechargez pour obtenir les fonctionnalités DevTools complètes.

```
    <span class="column originatingBody">Cour (Première
    Section)</span>
    " &nbsp;&nbsp;|&nbsp;&nbsp; "
    <span class="column dateColumn">23/03/2023</span>
  </div>
  <div class="hithighlightedLine hidden"> </div>
▼ <div class="linethree">
  ▼ <span class="summaryblock ">
    ▶ <span class="summarytext">…</span>
    ▼ <span class="fulltext">
        " Violation de l'article 10 - Liberté d'expression-
        {général} (Article 10-1 - Liberté d'expression)
        Dommage matériel et préjudice moral - réparation
        (Article 41 - Préjudice moral Dommage matériel
        Satisfaction équitable) "
```

⇒ Extract the States:

```
states = lineone.find("a", class_="document-link headline").get_text()
x = re.search(r" [vc]\. ", states)
states = re.findall(r"[\w\s]+", states[x.end():])
```

→ Following “v.” or “c.”

→ Starting from the end, we select the State’s name which are words made up of letters and spaces

⇒ Extract the dates:

```
date = linetwo.find("span", class_="column dateColumn").get_text()
```

⇒ Extract the articles violated and not violated:

Cleaning the conclusions

1) Clearly distinguish articles that were NOT violated from those who effectively were

```
articles = re.sub("No violation Of |Non-violation de l'", "ViolationNot",
conclusions, 0, re.I)
articles = re.sub("violation Of | violation de l'", "Violation", articles, 0, re.I)
```

2) Eliminate abbreviations

```
articles = re.sub("art\.", "Article", articles, 0, re.I)
```

Extract the articles' numbers

```
articles_not_violated = re.findall("(?<=ViolationNot)Article \d+ du Protocole n°
\s?\d+|(?<=ViolationNot)Article \d+ of Protocol
No.\s?\d+|(?<=ViolationNot)Article [P?\d+-?\d*\+?]+", articles, re.I)
articles_violated = re.findall("(?<=Violation)Article \d+ du Protocole n°
\s?\d+|(?<=Violation)Article \d+ of Protocol No.\s?\d+|(?<=Violation)Article
[P?\d+-?\d*\+?]+", articles, re.I)
```

NB:

- Articles can come from the European Convention on Human Rights but also from its **protocols**
- Articles' paragraphs can also be mentioned using an **hyphen**
- Juxtaposition of articles can be **phrased differently** (for example: Article P1-1-1+6-1+11)

Summarize into a dataframe

6 separate columns: CaseIds, State, Date, Full conclusions, Articles identified as violated and Articles identified as NOT violated

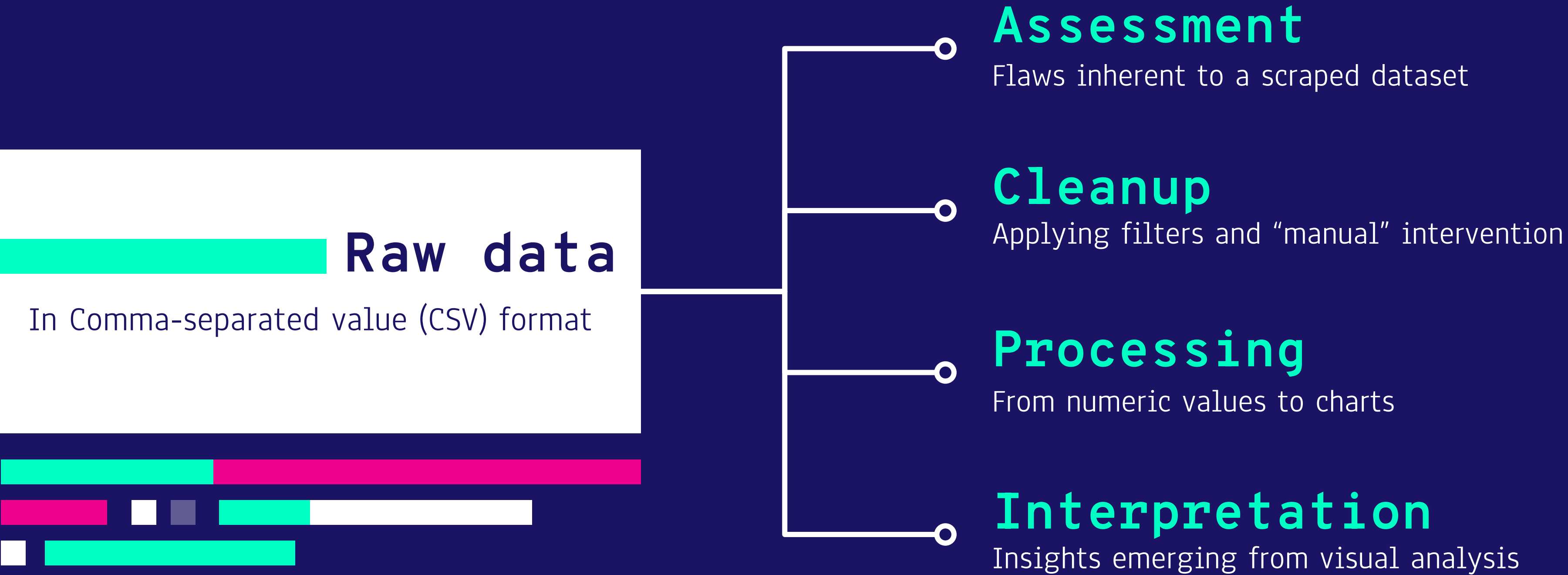
```
df = pd.DataFrame(data_scrapped, columns=["Ids", "State", "Date",
"Conclusions", "Articles violated", "Articles not violated"])
```

⇒ Use the extracted information summarized in the excel file to start our analysis

04

Analysis

Extracting insights from data



Raw data

In Comma-separated value (CSV) format

Assessment

Flaws inherent to a scraped dataset

Cleanup

Applying filters and “manual” intervention

Processing

From numeric values to charts

Interpretation

Insights emerging from visual analysis

Step 1: Assessing the scraped data

1) Visualizing the CSV file with appropriate software (Sheets, Excel)
2) Comparing the dataset to available statistics and orders of magnitude
3) Estimating the necessary resources to process the data and adjusting scope

Step 2: Cleaning up the dataset

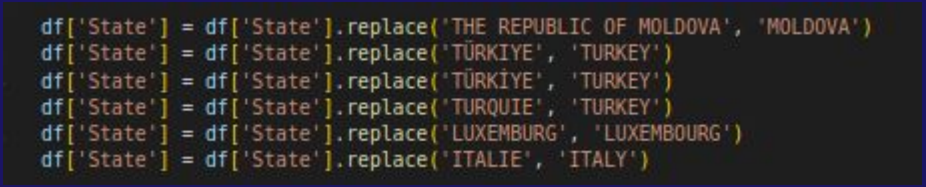
States

- Merging duplicates
- Removing outliers

ECHR Violations

- Fixing inconsistencies
- Unifying references

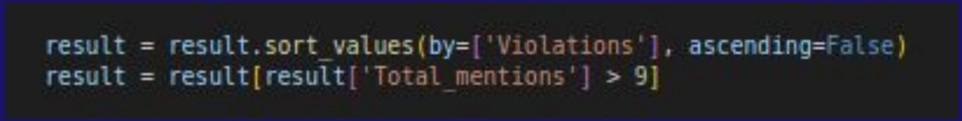
Fixing inconsistencies in States names



```
df['State'] = df['State'].replace('THE REPUBLIC OF MOLDOVA', 'MOLDOVA')
df['State'] = df['State'].replace('TÜRKIYE', 'TURKEY')
df['State'] = df['State'].replace('TÜRKİYE', 'TURKEY')
df['State'] = df['State'].replace('TURQUIE', 'TURKEY')
df['State'] = df['State'].replace('LUXEMBURG', 'LUXEMBOURG')
df['State'] = df['State'].replace('ITALIE', 'ITALY')
```

Manual intervention where losing data would substantially impact our findings

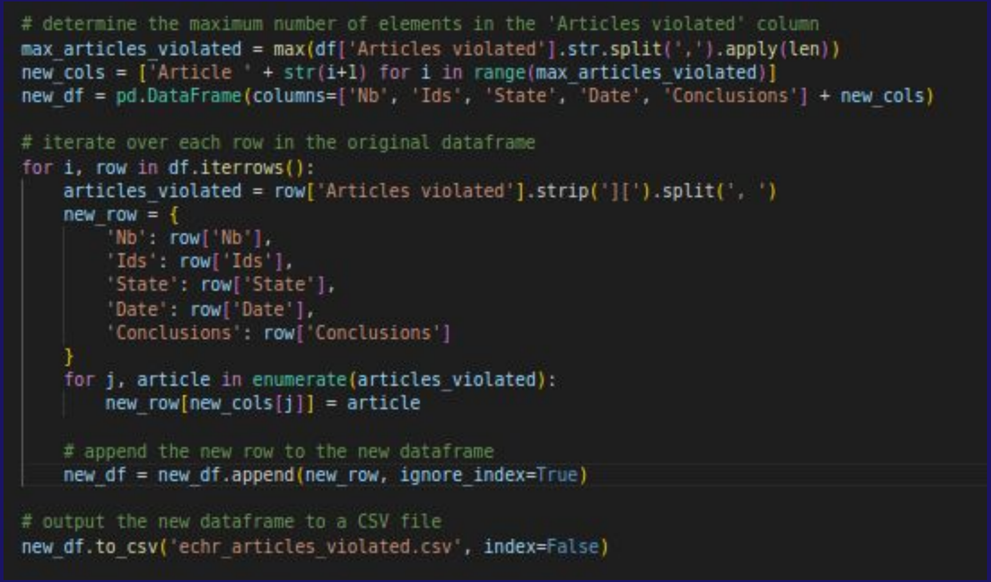
Filtering out low-impact outliers for an easier analysis



```
result = result.sort_values(by=['Violations'], ascending=False)
result = result[result['Total_mentions'] > 9]
```

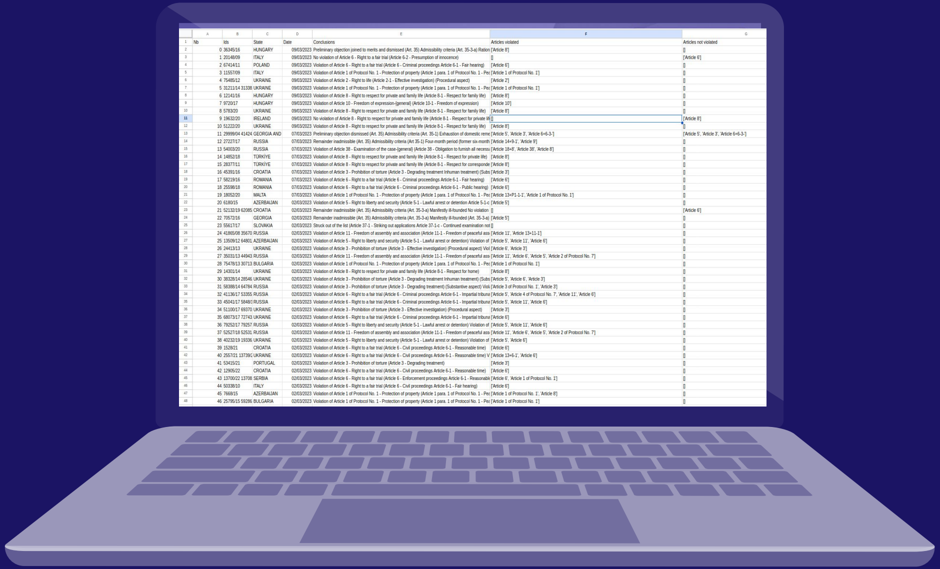
Fixing inconsistencies in ECHR Articles notation

Any ECHR case with multiple articles breached required splitting for proper analysis



```
# determine the maximum number of elements in the 'Articles violated' column
max_articles_violated = max(df['Articles violated'].str.split(',').apply(len))
new_cols = ['Article ' + str(i+1) for i in range(max_articles_violated)]
new_df = pd.DataFrame(columns=['Nb', 'Ids', 'State', 'Date', 'Conclusions'] + new_cols)

# iterate over each row in the original dataframe
for i, row in df.iterrows():
    articles_violated = row['Articles violated'].strip('][').split(', ')
    new_row = {
        'Nb': row['Nb'],
        'Ids': row['Ids'],
        'State': row['State'],
        'Date': row['Date'],
        'Conclusions': row['Conclusions']
    }
    for j, article in enumerate(articles_violated):
        new_row[new_cols[j]] = article

    # append the new row to the new dataframe
    new_df = new_df.append(new_row, ignore_index=True)

# output the new dataframe to a CSV file
new_df.to_csv('echr_articles_violated.csv', index=False)
```

Step 3: From numbers to charts



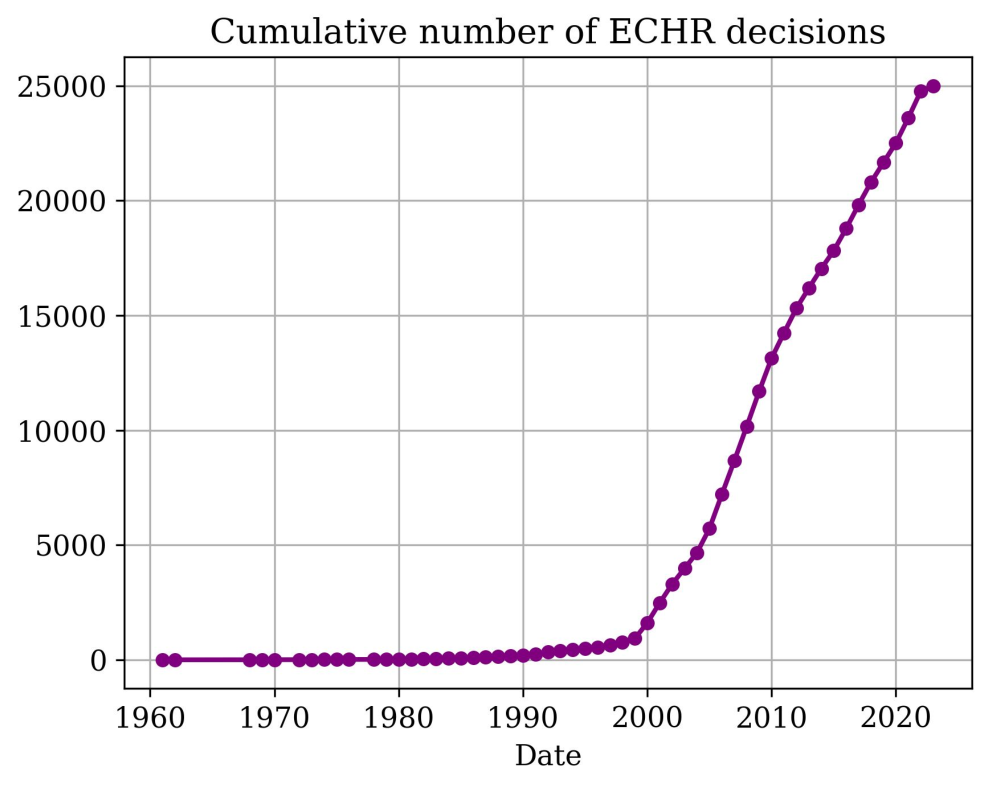
Nb	Ids	State	Date	Conclusions	Articles violated	Articles not violated
0	36345/16	HUNGARY	09/03/2023	Preliminary objection joined to merits and dismissed (Art. 35) Admissibility criteria (Art. 35-3-a) Ration	['Article 8']	[]
1	20148/09	ITALY	09/03/2023	No violation of Article 6 - Right to a fair trial (Article 6-2 - Presumption of innocence)	[]	['Article 6']
2	67414/11	POLAND	09/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Fair hearing)	['Article 6']	[]
3	11557/09	ITALY	09/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 1 of Protocol No. 1']	[]
4	75485/12	UKRAINE	09/03/2023	Violation of Article 2 - Right to life (Article 2-1 - Effective investigation) (Procedural aspect)	['Article 2']	[]
5	31211/14 31338	UKRAINE	09/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 1 of Protocol No. 1']	[]
6	12141/16	HUNGARY	09/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for family life)	['Article 8']	[]
7	9720/17	HUNGARY	09/03/2023	Violation of Article 10 - Freedom of expression-{general} (Article 10-1 - Freedom of expression)	['Article 10']	[]
8	5783/20	UKRAINE	09/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for family life)	['Article 8']	[]
9	19632/20	IRELAND	09/03/2023	No violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for private lif	[]	['Article 8']
10	51222/20	UKRAINE	09/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for family life)	['Article 8']	[]
11	29999/04 41424	GEORGIA AND	07/03/2023	Preliminary objection dismissed (Art. 35) Admissibility criteria (Art. 35-1) Exhaustion of domestic reme	['Article 5', 'Article 3', 'Article 6+6-3-']	['Article 5', 'Article 3', 'Article 6+6-3-']
12	27227/17	RUSSIA	07/03/2023	Remainder inadmissible (Art. 35) Admissibility criteria (Art 35-1) Four-month period (former six-month	['Article 14+9-1', 'Article 9']	[]
13	54003/20	RUSSIA	07/03/2023	Violation of Article 38 - Examination of the case-{general} (Article 38 - Obligation to furnish all necessa	['Article 18+8', 'Article 38', 'Article 8']	[]
14	14852/18	TÜRKİYE	07/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for private life)	['Article 8']	[]
15	28377/11	TÜRKİYE	07/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for corresponde	['Article 8']	[]
16	45391/16	CROATIA	07/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment Inhuman treatment) (Subs	['Article 3']	[]
17	58219/16	ROMANIA	07/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Fair hearing)	['Article 6']	[]
18	25598/18	ROMANIA	07/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Public hearing)	['Article 6']	[]
19	18052/20	MALTA	07/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 13+P1-1-1', 'Article 1 of Protocol No. 1']	[]
20	6180/15	AZERBAIJAN	02/03/2023	Violation of Article 5 - Right to liberty and security (Article 5-1 - Lawful arrest or detention Article 5-1-c	['Article 5']	[]
21	52132/19 62085	CROATIA	02/03/2023	Remainder inadmissible (Art. 35) Admissibility criteria (Art. 35-3-a) Manifestly ill-founded No violation	[]	['Article 6']
22	70572/16	GEORGIA	02/03/2023	Remainder inadmissible (Art. 35) Admissibility criteria (Art. 35-3-a) Manifestly ill-founded (Art. 35-3-a)	['Article 5']	[]
23	55617/17	SLOVAKIA	02/03/2023	Struck out of the list (Article 37-1 - Striking out applications Article 37-1-c - Continued examination not	[]	[]
24	41865/08 35670	RUSSIA	02/03/2023	Violation of Article 11 - Freedom of assembly and association (Article 11-1 - Freedom of peaceful ass	['Article 11', 'Article 13+11-1']	[]
25	13509/12 64801	AZERBAIJAN	02/03/2023	Violation of Article 5 - Right to liberty and security (Article 5-1 - Lawful arrest or detention) Violation of	['Article 5', 'Article 11', 'Article 6']	[]
26	24413/13	UKRAINE	02/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Effective investigation) (Procedural aspect) Viol	['Article 6', 'Article 3']	[]
27	35031/13 44943	RUSSIA	02/03/2023	Violation of Article 11 - Freedom of assembly and association (Article 11-1 - Freedom of peaceful ass	['Article 11', 'Article 6', 'Article 5', 'Article 2 of Protocol No. 7']	[]
28	75478/13 30713	BULGARIA	02/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 1 of Protocol No. 1']	[]
29	14301/14	UKRAINE	02/03/2023	Violation of Article 8 - Right to respect for private and family life (Article 8-1 - Respect for home)	['Article 8']	[]
30	38328/14 28546	UKRAINE	02/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment Inhuman treatment) (Subs	['Article 5', 'Article 6', 'Article 3']	[]
31	58388/14 64784	RUSSIA	02/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment) (Substantive aspect) Viol	['Article 3 of Protocol No. 1', 'Article 3']	[]
32	41136/17 53355	RUSSIA	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Impartial tribuna	['Article 5', 'Article 4 of Protocol No. 7', 'Article 11', 'Article 6']	[]
33	45041/17 5848/1	RUSSIA	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Impartial tribuna	['Article 5', 'Article 11', 'Article 6']	[]
34	51100/17 69370	UKRAINE	02/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Effective investigation) (Procedural aspect)	['Article 3']	[]
35	68073/17 72743	UKRAINE	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Criminal proceedings Article 6-1 - Impartial tribuna	['Article 6']	[]
36	79252/17 79257	RUSSIA	02/03/2023	Violation of Article 5 - Right to liberty and security (Article 5-1 - Lawful arrest or detention) Violation of	['Article 5', 'Article 11', 'Article 6']	[]
37	52527/18 52531	RUSSIA	02/03/2023	Violation of Article 11 - Freedom of assembly and association (Article 11-1 - Freedom of peaceful ass	['Article 11', 'Article 6', 'Article 5', 'Article 2 of Protocol No. 7']	[]
38	40232/19 19336	UKRAINE	02/03/2023	Violation of Article 5 - Right to liberty and security (Article 5-1 - Lawful arrest or detention) Violation of	['Article 5', 'Article 6']	[]
39	1528/21	CROATIA	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Civil proceedings Article 6-1 - Reasonable time)	['Article 6']	[]
40	2557/21 13739/2	UKRAINE	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Civil proceedings Article 6-1 - Reasonable time) V	['Article 13+6-1', 'Article 6']	[]
41	53415/21	PORTUGAL	02/03/2023	Violation of Article 3 - Prohibition of torture (Article 3 - Degrading treatment)	['Article 3']	[]
42	12905/22	CROATIA	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Civil proceedings Article 6-1 - Reasonable time)	['Article 6']	[]
43	13700/22 13708	SERBIA	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Enforcement proceedings Article 6-1 - Reasonable	['Article 6', 'Article 1 of Protocol No. 1']	[]
44	50338/10	ITALY	02/03/2023	Violation of Article 6 - Right to a fair trial (Article 6 - Civil proceedings Article 6-1 - Fair hearing)	['Article 6']	[]
45	7668/15	AZERBAIJAN	02/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 1 of Protocol No. 1', 'Article 8']	[]
46	25795/15 59286	BULGARIA	02/03/2023	Violation of Article 1 of Protocol No. 1 - Protection of property (Article 1 para. 1 of Protocol No. 1 - Pea	['Article 1 of Protocol No. 1']	[]

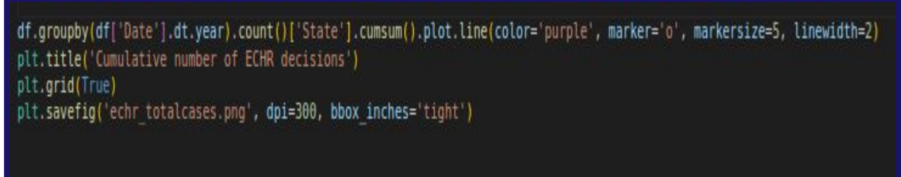
Leveraging existing tools for better data manipulation and visualization

pandas

matplotlib

ECHR activity from 1959 to 2023



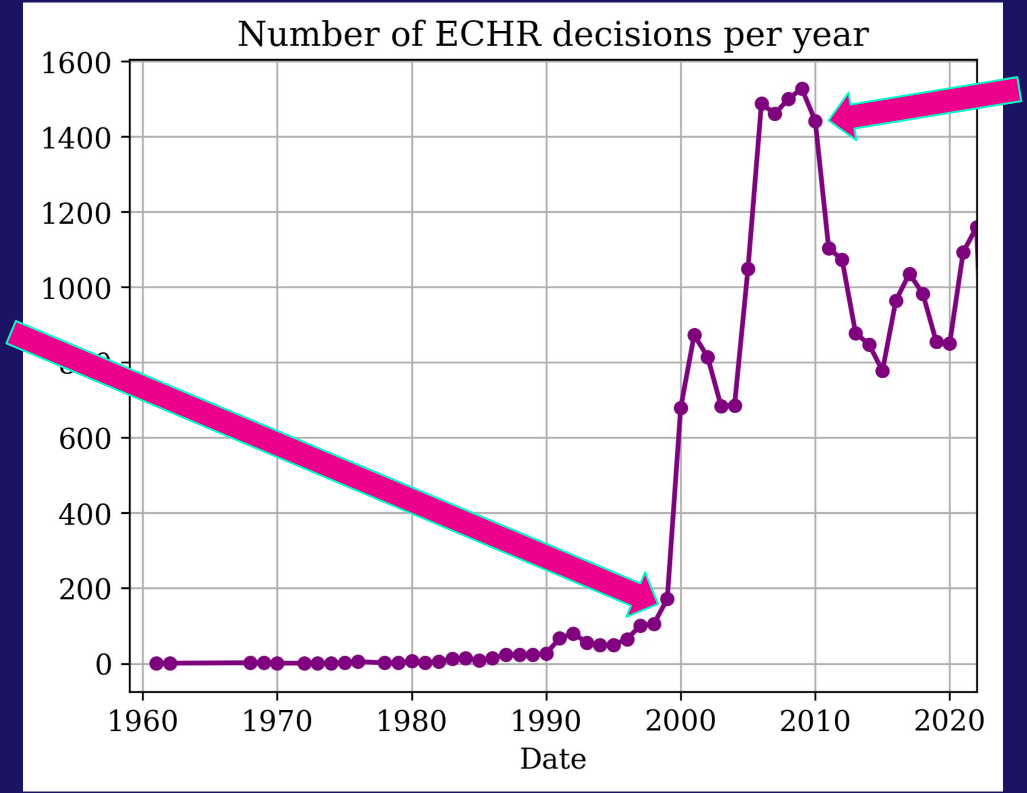


```
df.groupby(df['Date'].dt.year).count()['State'].cumsum().plot.line(color='purple', marker='o', markersize=5, linewidth=2)
plt.title('Cumulative number of ECHR decisions')
plt.grid(True)
plt.savefig('echr_totalcases.png', dpi=300, bbox_inches='tight')
```

Trends presented in a straightforward manner may lack granularity

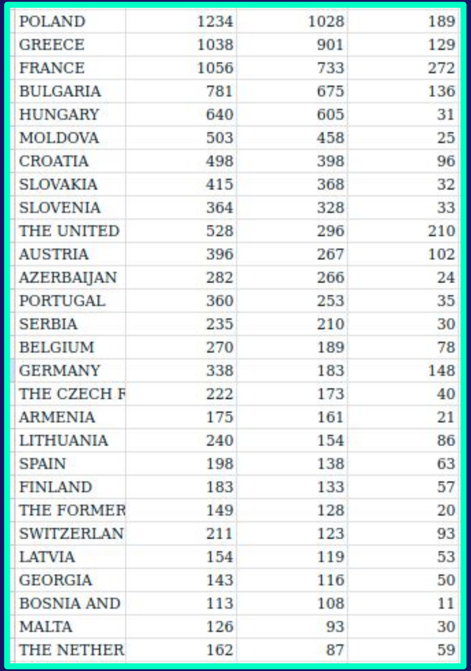
ECHR activity from 1959 to 2023

1998 : Protocol no. 11 replaced the old system with a full-time court. It enabled applicants to bring their cases directly before the Court, with no prior filtering.



2010 : Protocol no. 14 establishes a new admissibility criterion before the Court. It requires the existence of a “significant disadvantage” for the applicant.

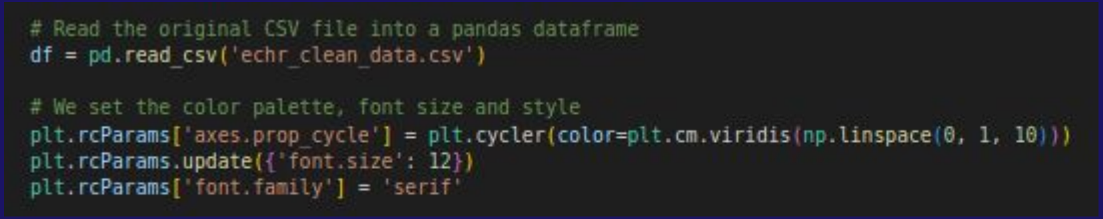
Ranking countries by number of violations



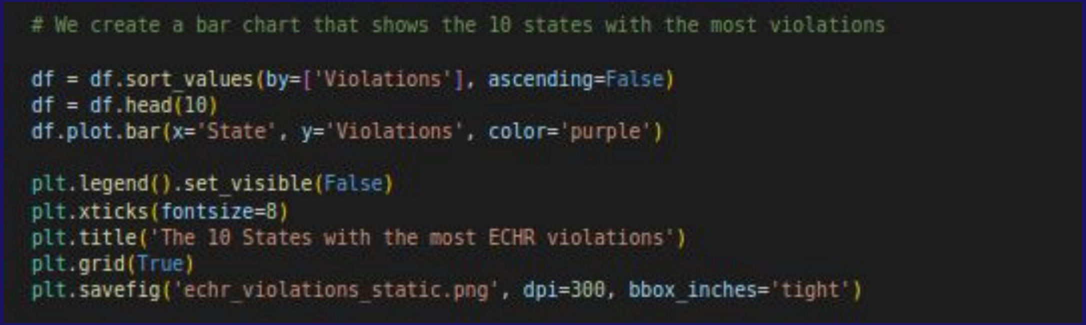
POLAND	1234	1028	189
GREECE	1038	901	129
FRANCE	1056	733	272
BULGARIA	781	675	136
HUNGARY	640	605	31
MOLDOVA	503	458	25
CROATIA	498	398	96
SLOVAKIA	415	368	32
SLOVENIA	364	328	33
THE UNITED	528	296	210
AUSTRIA	396	267	102
AZERBAIJAN	282	266	24
PORTUGAL	360	253	35
SERBIA	235	210	30
BELGIUM	270	189	78
GERMANY	338	183	148
THE CZECH F	222	173	40
ARMENIA	175	161	21
LITHUANIA	240	154	86
SPAIN	198	138	63
FINLAND	183	133	57
THE FORMER	149	128	20
SWITZERLAN	211	123	93
LATVIA	154	119	53
GEORGIA	143	116	50
BOSNIA AND	113	108	11
MALTA	126	93	30
THE NETHER	162	87	59

Creating simplified CSV files for easier chart generation

Ranking countries by number of violations

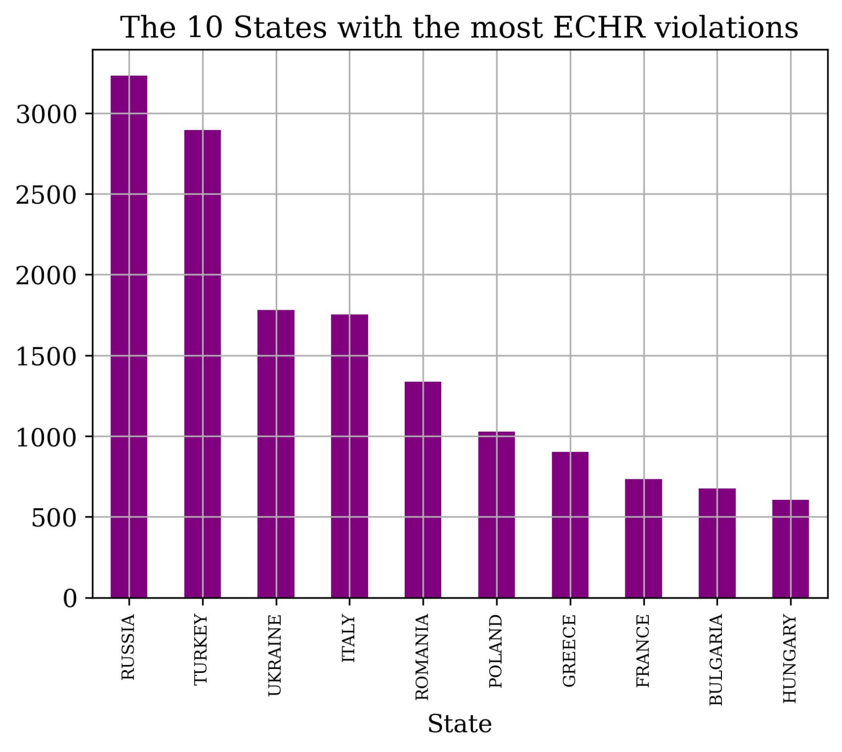


```
# Read the original CSV file into a pandas dataframe
df = pd.read_csv('echr_clean_data.csv')

# We set the color palette, font size and style
plt.rcParams['axes.prop_cycle'] = plt.cycler(color=plt.cm.viridis(np.linspace(0, 1, 10)))
plt.rcParams.update({'font.size': 12})
plt.rcParams['font.family'] = 'serif'
```



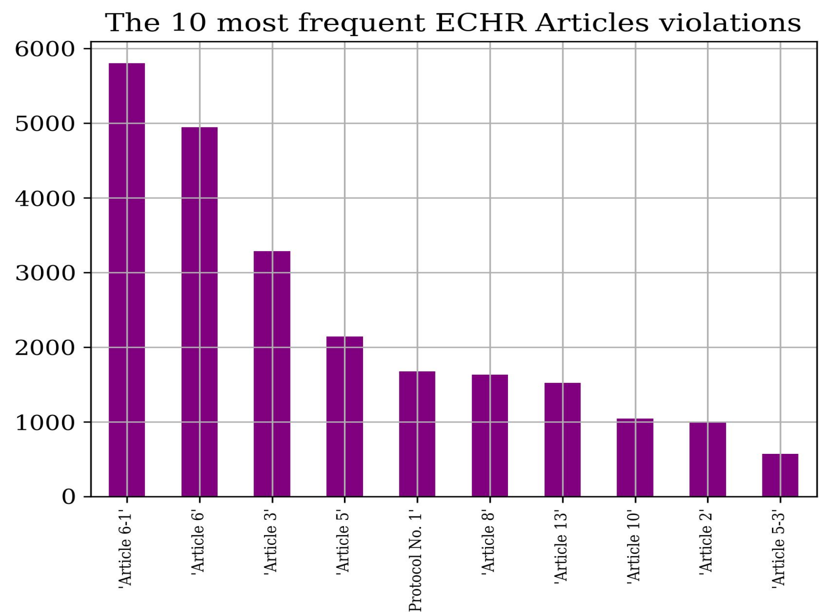
```
# We create a bar chart that shows the 10 states with the most violations

df = df.sort_values(by=['Violations'], ascending=False)
df = df.head(10)
df.plot.bar(x='State', y='Violations', color='purple')

plt.legend().set_visible(False)
plt.xticks(fontsize=8)
plt.title('The 10 States with the most ECHR violations')
plt.grid(True)
plt.savefig('echr_violations_static.png', dpi=300, bbox_inches='tight')
```

Ranking countries by number of violations



Note : The Russian Federation ceased to be a party to the ECHR on 16 September 2022.

A Ranking of ECHR Articles Based on Breach Frequency



6-1 | Right to a fair trial (6-1 | Within a reasonable time)

3 | Prohibition of torture

5 | Right to liberty and security

8 | Respect for private and family life

13 | Right to an effective remedy

Thank you for your attention

Any question?