#1.1

```
[11]: deaths_by_country
```

```
[11]: Country
      AFGHANISTAN                              15245.0
      ALBANIA                                   2827.0
      ALGERIA                                  39339.0
      ANTARCTICA                                   0.0
      ANTIGUA AND BARBUDA                          0.0
                                                 ...
      VENEZUELA                                44484.0
      VIETNAM                                       0.0
      WALLIS AND FUTUNA (FRENCH TERRITORY)         5.0
      YEMEN                                      4071.0
      ZAMBIA                                        0.0
      Name: Total Deaths, Length: 158, dtype: float64
```

```
[12]: top10_deaths = deaths_by_country.sort_values(ascending=False).head(10)

      print(top10_deaths)
```

```
      Country
      CHINA        2106524.0
      TURKEY       1008863.0
      IRAN          761654.0
      SYRIA         487726.0
      ITALY         423280.0
      HAITI         323782.0
      JAPAN         319443.0
      AZERBAIJAN    319251.0
      INDONESIA     282838.0
      ARMENIA       189000.0
      Name: Total Deaths, dtype: float64
```
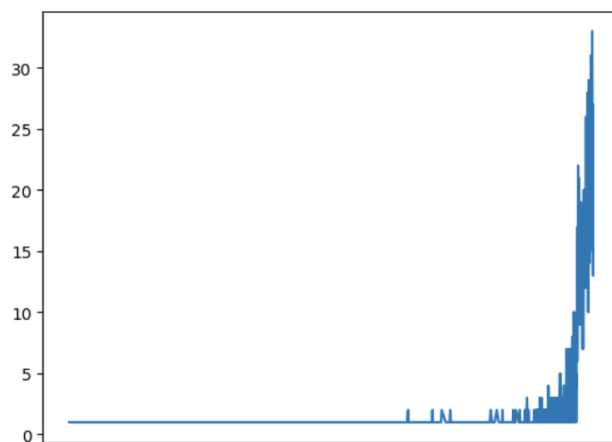
#1.2

```
[15]:  #1.2
       eq6 = Sig_Eqs[Sig_Eqs["Mag"] > 6]
       count_per_year = eq6.groupby("Year").size().sort_index()
       print(count_per_year)

       Year
       -2150.0    1
       -2000.0    1
       -1250.0    1
       -1050.0    1
       -479.0     1
                 ..
        2021.0    23
        2022.0    21
        2023.0    27
        2024.0    13
        2025.0    18
       Length: 552, dtype: int64
```

```
[17]:  count_per_year.plot()
       plt.show()
       #观察到的趋势：接近2000年时，mag>6地震显著增多
       #原因：可能是观测手段增强，或是人类对地质开发显著增多，引起地壳变化
```
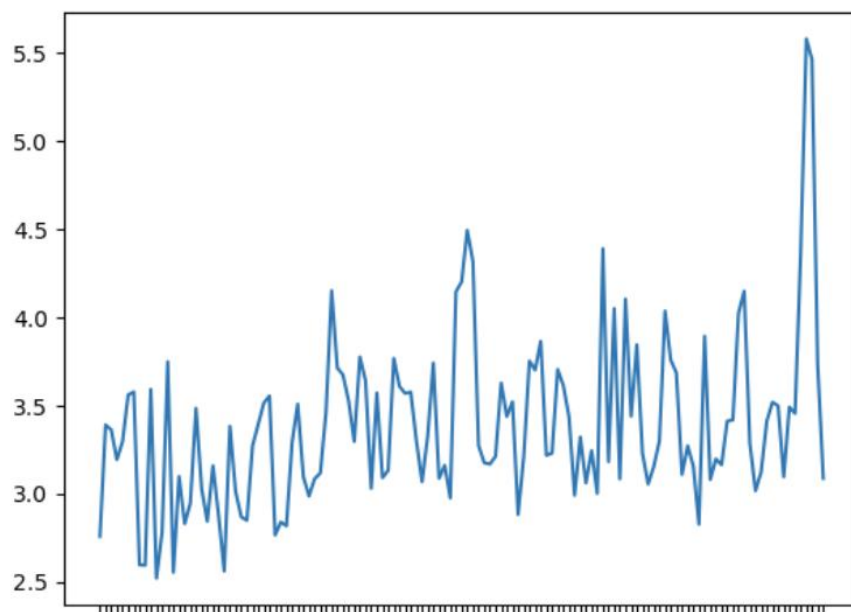

\#观察到的趋势：接近 2000 年时，mag>6 地震显著增多

\#原因：可能是观测手段增强，或是人类对地质开发显著增多，引起地壳变化
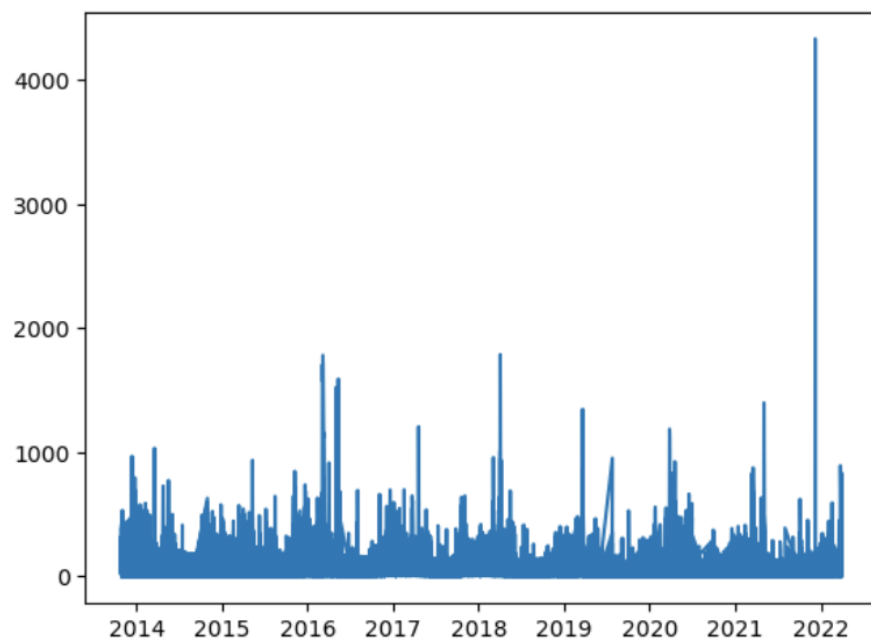
\#1.3

	Country	TotalEq	LargestEqDate
14	CHINA	623	1668-7-25
33	JAPAN	424	2011-3-11
72	INDONESIA	421	2004-12-26
7	IRAN	388	856-12-22
9	TURKEY	358	1939-12-26
5	ITALY	333	1915-1-13
3	GREECE	289	365-7-21
55	USA	280	1964-3-28
70	PHILIPPINES	230	1897-9-21
51	MEXICO	214	1787-3-28

#2

#3 数据来源<u>数据详情 - 数据共享服务系统</u>（2013 年-2022 年全国 328 个城市的空气质量数据）

平均值 (mean): 42.05812105097342
中位数 (median): 32.0
标准差 (std): 38.15874445353411
最小值 (min): 0
最大值 (max): 4332
95% 分位数 (95th percentile): 110.0