EDA of Game of thrones-Copy1

October 27, 2022

[1]:
```
import seaborn as sns
sns.set_style("darkgrid")
import matplotlib.pyplot as plt

import pandas as pd
import numpy as np
```

[7]:
```
battles = pd.read_csv(r"C:\Users\sound\Downloads\EDA GOT\battles.csv")
character_deaths = pd.read_csv(r"C:\Users\sound\Downloads\EDA␣
 ↪GOT\character-deaths.csv")
```

1 Battle dataset

[8]:
```
battles.shape
```

[8]:
```
(38, 25)
```

[9]:
```
battles.head()
```

[9]:
```
                            name  year  battle_number  \
0     Battle of the Golden Tooth   298              1
1    Battle at the Mummer's Ford   298              2
2             Battle of Riverrun   298              3
3       Battle of the Green Fork   298              4
4  Battle of the Whispering Wood   298              5

              attacker_king             defender_king attacker_1 attacker_2  \
0  Joffrey/Tommen Baratheon                Robb Stark  Lannister        NaN
1  Joffrey/Tommen Baratheon                Robb Stark  Lannister        NaN
2  Joffrey/Tommen Baratheon                Robb Stark  Lannister        NaN
3                Robb Stark  Joffrey/Tommen Baratheon      Stark        NaN
4                Robb Stark  Joffrey/Tommen Baratheon      Stark      Tully

  attacker_3 attacker_4 defender_1  … major_death  major_capture  \
0        NaN        NaN      Tully  …         1.0            0.0
1        NaN        NaN  Baratheon  …         1.0            0.0
2        NaN        NaN      Tully  …         0.0            1.0
```

```
3        NaN        NaN  Lannister  …         1.0            1.0
4        NaN        NaN  Lannister  …         1.0            1.0

   attacker_size defender_size  \
0        15000.0        4000.0
1            NaN         120.0
2        15000.0       10000.0
3        18000.0       20000.0
4         1875.0        6000.0

                                  attacker_commander  \
0                                    Jaime Lannister
1                                     Gregor Clegane
2                       Jaime Lannister, Andros Brax
3  Roose Bolton, Wylis Manderly, Medger Cerwyn, H…
4                          Robb Stark, Brynden Tully

                                  defender_commander  summer         location  \
0                               Clement Piper, Vance     1.0     Golden Tooth
1                                   Beric Dondarrion     1.0    Mummer's Ford
2                      Edmure Tully, Tytos Blackwood     1.0         Riverrun
3  Tywin Lannister, Gregor Clegane, Kevan Lannist…     1.0       Green Fork
4                                    Jaime Lannister     1.0  Whispering Wood

            region note
0  The Westerlands  NaN
1   The Riverlands  NaN
2   The Riverlands  NaN
3   The Riverlands  NaN
4   The Riverlands  NaN

[5 rows x 25 columns]
```

[29]:
```
battles.tail()
```

[29]:
```
                           name  year  battle_number  \
33  Second Seige of Storm's End   300             34
34         Siege of Dragonstone   300             35
35            Siege of Riverrun   300             36
36           Siege of Raventree   300             37
37          Siege of Winterfell   300             38

               attacker_king             defender_king primary_attacker  \
33  Joffrey/Tommen Baratheon         Stannis Baratheon        Baratheon
34  Joffrey/Tommen Baratheon         Stannis Baratheon        Baratheon
35  Joffrey/Tommen Baratheon                Robb Stark        Lannister
36  Joffrey/Tommen Baratheon                Robb Stark          Bracken
```

```
37         Stannis Baratheon  Joffrey/Tommen Baratheon        Baratheon

   attacker_2 attacker_3 attacker_4 primary_defender  … major_death  \
33        NaN        NaN        NaN        Baratheon  …         0.0
34        NaN        NaN        NaN        Baratheon  …         0.0
35       Frey        NaN        NaN            Tully  …         0.0
36  Lannister        NaN        NaN        Blackwood  …         0.0
37   Karstark    Mormont     Glover           Bolton  …         NaN

    major_capture  attacker_size defender_size  \
33            0.0            NaN         200.0
34            0.0         2000.0           NaN
35            0.0         3000.0           NaN
36            1.0         1500.0           NaN
37            NaN         5000.0        8000.0

                             attacker_commander  defender_commander  summer  \
33                   Mace Tyrell, Mathis Rowan      Gilbert Farring     0.0
34                Loras Tyrell, Raxter Redwyne        Rolland Storm     0.0
35  Daven Lannister, Ryman Fey, Jaime Lannister        Brynden Tully     0.0
36              Jonos Bracken, Jaime Lannister      Tytos Blackwood     0.0
37                            Stannis Baratheon         Roose Bolton     0.0

       location           region note
33  Storm's End  The Stormlands  NaN
34  Dragonstone  The Stormlands  NaN
35     Riverrun  The Riverlands  NaN
36    Raventree  The Riverlands  NaN
37   Winterfell       The North  NaN

[5 rows x 25 columns]
```

[10]:

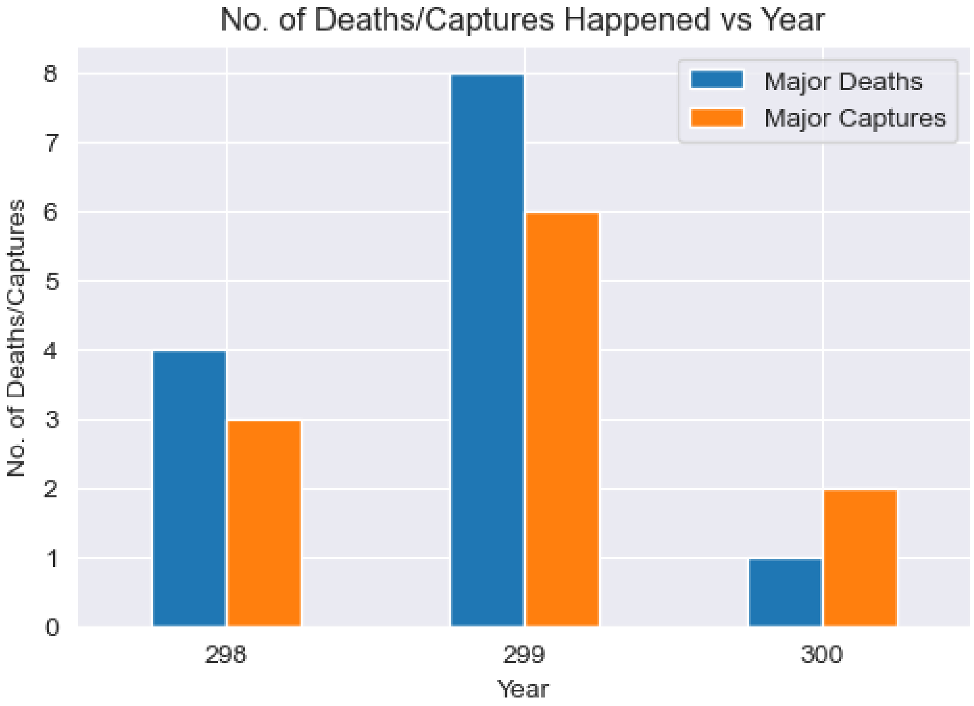
```
# Total of Major Deaths/ Major Captures Happened those years
battles.groupby(by="year")[["major_death", "major_capture"]].sum()
```

[10]:

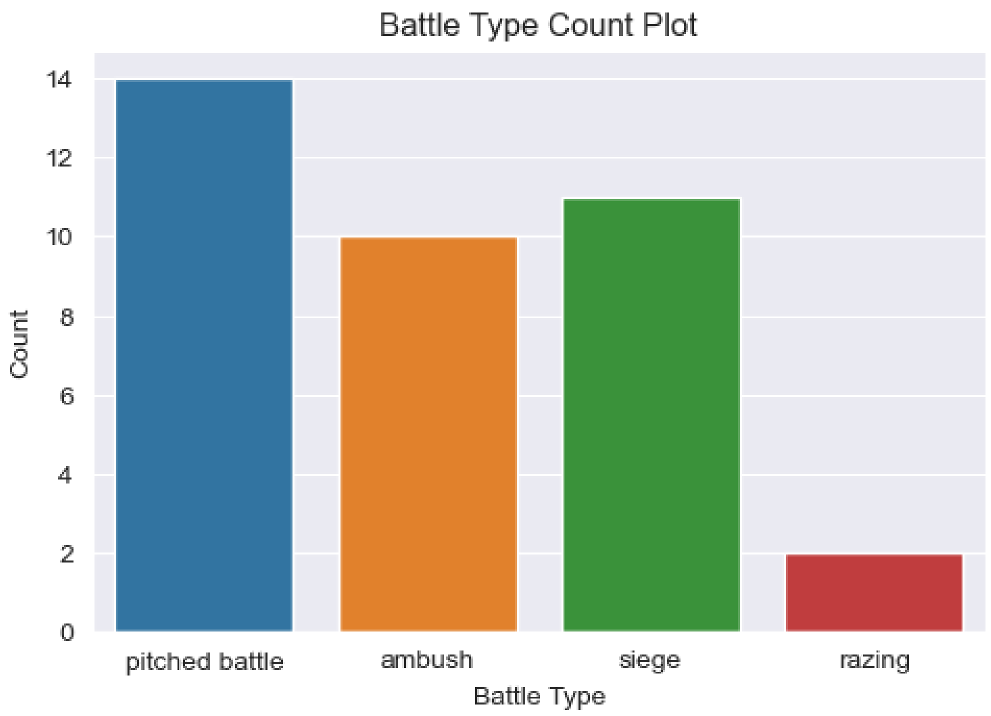
```
      major_death  major_capture
year
298           4.0            3.0
299           8.0            6.0
300           1.0            2.0
```

[11]:

```
#Plotting in graph
plt.rcParams["figure.figsize"] = (6, 4)
plt.rcParams["figure.dpi"] = (100)
p = battles.groupby(by="year")[["major_death", "major_capture"]].sum().plot.
 ↪bar(rot=0)
plt.title("No. of Deaths/Captures Happened vs Year")
plt.xlabel("Year")
plt.ylabel("No. of Deaths/Captures")
plt.legend(["Major Deaths", "Major Captures"])
plt.show()
```



```
[12]: #battlecount
      sns.countplot(x=battles.battle_type)
      plt.title("Battle Type Count Plot")
      plt.xlabel("Battle Type")
      plt.ylabel("Count")
      plt.show()
```



[13]:
```
# Renaming Some Columns
battles.rename(columns={"attacker_1": "primary_attacker"}, inplace=True)
battles.rename(columns={"defender_1": "primary_defender"}, inplace=True)
```

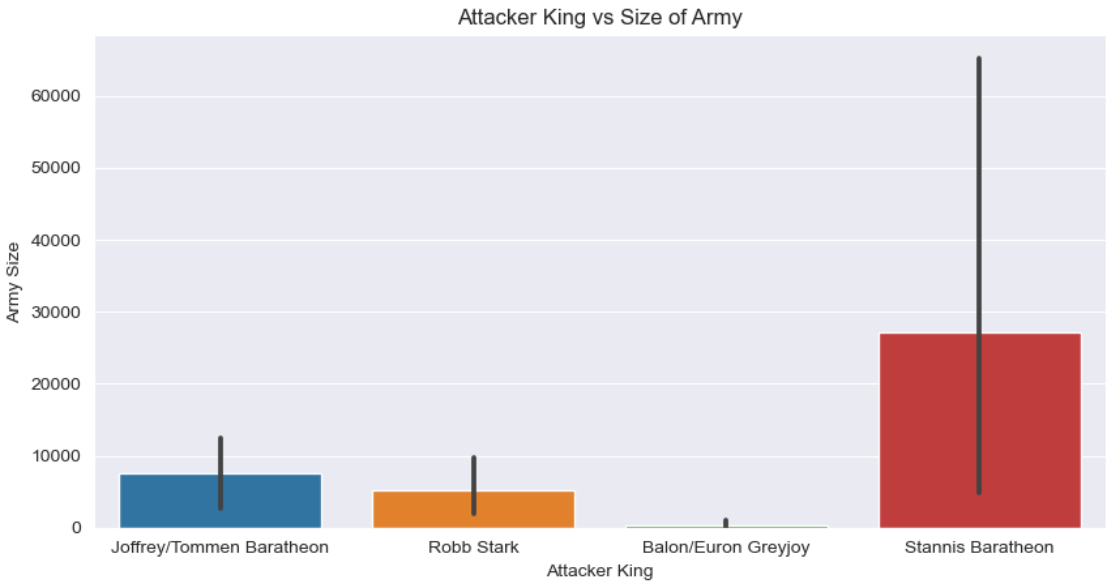
[14]:
```
battles.head()
```

[14]:
```
                            name  year  battle_number  \
0     Battle of the Golden Tooth   298              1
1    Battle at the Mummer's Ford   298              2
2             Battle of Riverrun   298              3
3       Battle of the Green Fork   298              4
4  Battle of the Whispering Wood   298              5

              attacker_king             defender_king primary_attacker  \
0  Joffrey/Tommen Baratheon                Robb Stark        Lannister
1  Joffrey/Tommen Baratheon                Robb Stark        Lannister
2  Joffrey/Tommen Baratheon                Robb Stark        Lannister
3                Robb Stark  Joffrey/Tommen Baratheon            Stark
4                Robb Stark  Joffrey/Tommen Baratheon            Stark

  attacker_2 attacker_3 attacker_4 primary_defender  … major_death  \
0        NaN        NaN        NaN            Tully  …         1.0
1        NaN        NaN        NaN        Baratheon  …         1.0
2        NaN        NaN        NaN            Tully  …         0.0
```

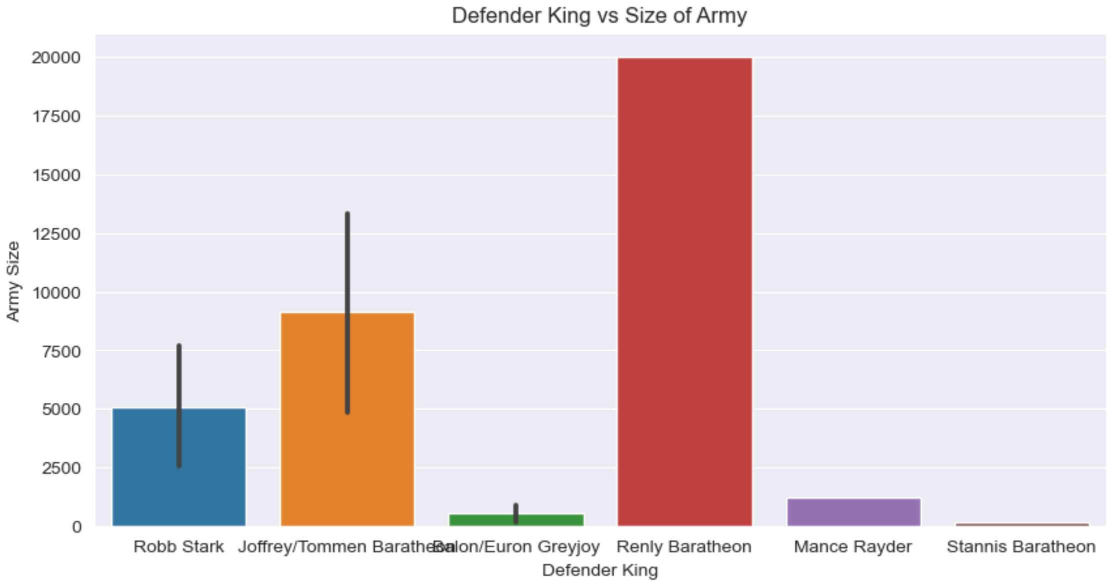
```
3        NaN        NaN        NaN        Lannister  …         1.0
4      Tully        NaN        NaN        Lannister  …         1.0

   major_capture  attacker_size defender_size  \
0            0.0        15000.0        4000.0
1            0.0            NaN         120.0
2            1.0        15000.0       10000.0
3            1.0        18000.0       20000.0
4            1.0         1875.0        6000.0

                                  attacker_commander  \
0                                    Jaime Lannister
1                                     Gregor Clegane
2                       Jaime Lannister, Andros Brax
3  Roose Bolton, Wylis Manderly, Medger Cerwyn, H…
4                          Robb Stark, Brynden Tully

                                  defender_commander  summer          location  \
0                               Clement Piper, Vance     1.0      Golden Tooth
1                                   Beric Dondarrion     1.0     Mummer's Ford
2                      Edmure Tully, Tytos Blackwood     1.0          Riverrun
3  Tywin Lannister, Gregor Clegane, Kevan Lannist…     1.0        Green Fork
4                                    Jaime Lannister     1.0   Whispering Wood

            region note
0  The Westerlands  NaN
1   The Riverlands  NaN
2   The Riverlands  NaN
3   The Riverlands  NaN
4   The Riverlands  NaN

[5 rows x 25 columns]
```

[15]:

```
#Attackerking graph
plt.rcParams["figure.figsize"] = (10,5)
plt.rcParams["figure.dpi"] = (100)
sns.barplot(x="attacker_king", y="attacker_size", data=battles)
plt.title("Attacker King vs Size of Army")
plt.xlabel("Attacker King")
plt.ylabel("Army Size")
plt.show()
```

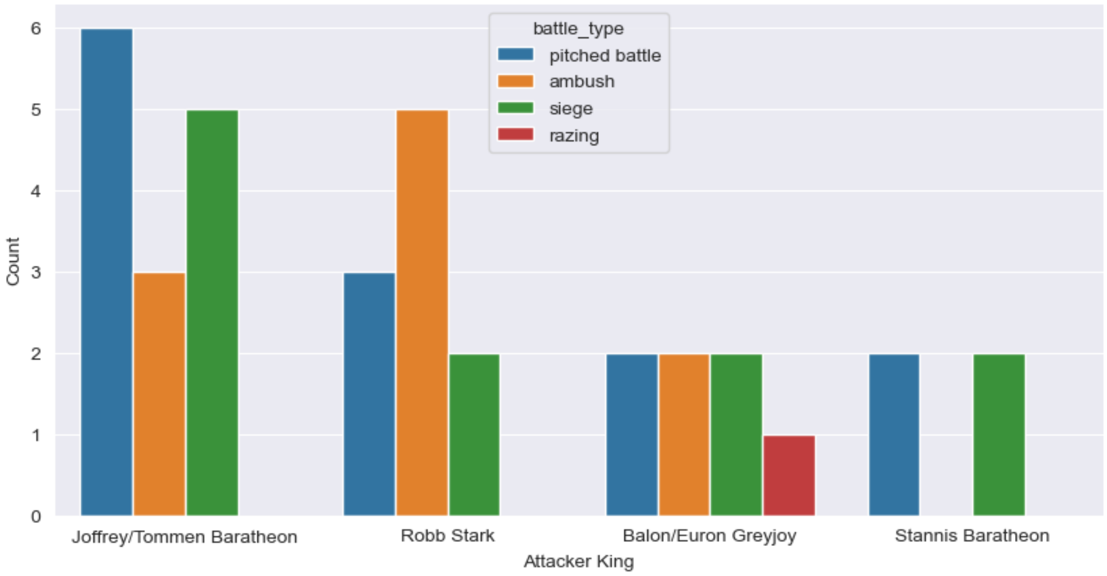


[17]:
```
#Defenderking graph
sns.barplot(x="defender_king", y="defender_size", data=battles)
plt.title("Defender King vs Size of Army")
plt.xlabel("Defender King")
plt.ylabel("Army Size")
plt.show()
```



[18]:

```
sns.countplot(x=battles.attacker_king, hue=battles.battle_type)
plt.xlabel("Attacker King")
plt.ylabel("Count")
plt.show()
```



2 Characters_death dataset

[21]:

```
character_deaths.shape
```

[21]:

```
(917, 13)
```

[22]:

```
character_deaths.head()
```

[22]:

```
                       Name       Allegiances  Death Year  Book of Death  \
0            Addam Marbrand         Lannister         NaN            NaN
1  Aegon Frey (Jinglebell)              None       299.0            3.0
2           Aegon Targaryen  House Targaryen         NaN            NaN
3             Adrack Humble     House Greyjoy       300.0            5.0
4            Aemon Costayne         Lannister         NaN            NaN

   Death Chapter  Book Intro Chapter  Gender  Nobility  GoT  CoK  SoS  FfC  \
0            NaN                56.0       1         1    1    1    1    1
1           51.0                49.0       1         1    0    0    1    0
2            NaN                 5.0       1         1    0    0    0    0
3           20.0                20.0       1         1    0    0    0    0
4            NaN                 NaN       1         1    0    0    1    0
```

```
   DwD
0    0
1    0
2    1
3    1
4    0
```

[23]:
```
character_deaths.tail()
```

[23]:
```
                    Name Allegiances  Death Year  Book of Death  Death Chapter  \
912                Zollo        None         NaN            NaN            NaN
913   Yurkhaz zo Yunzak         None       300.0            5.0           59.0
914    Yezzan Zo Qaggaz         None       300.0            5.0           57.0
915    Torwynd the Tame     Wildling       300.0            5.0           73.0
916       Talbert Serry       Tyrell       300.0            4.0           29.0

     Book Intro Chapter  Gender  Nobility  GoT  CoK  SoS  FfC  DwD
912                21.0       1         0    0    0    1    0    0
913                47.0       1         0    0    0    0    0    1
914                25.0       1         1    0    0    0    0    1
915                73.0       1         0    0    0    1    0    0
916                29.0       1         1    0    0    0    1    0
```

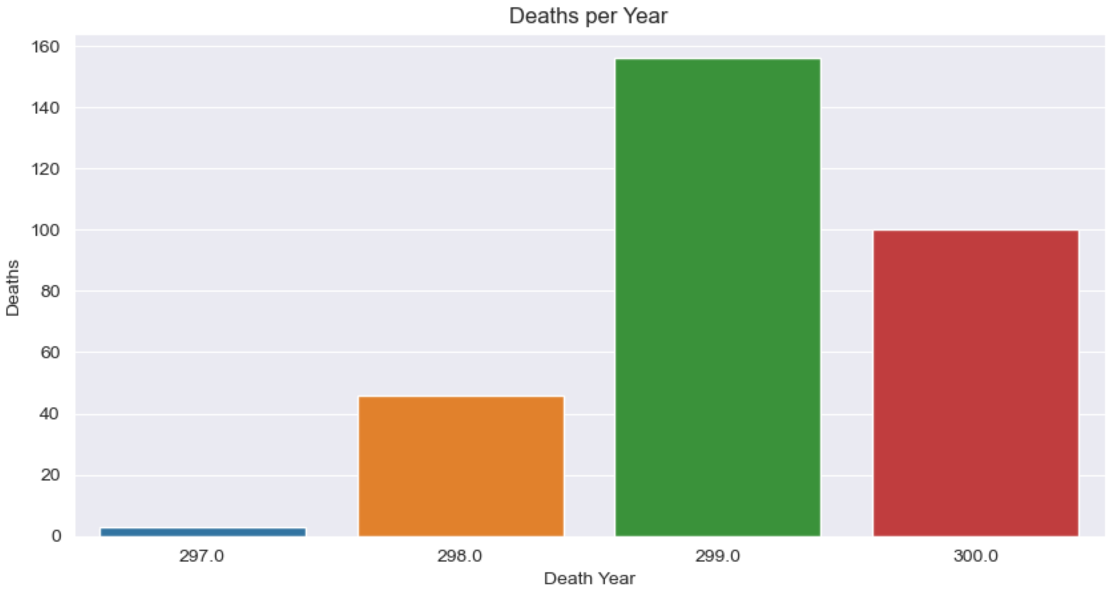
[25]:
```
character_deaths.Gender.value_counts()
```

[25]:
```
1    760
0    157
Name: Gender, dtype: int64
```

[26]:
```
character_deaths.Nobility.value_counts()
```

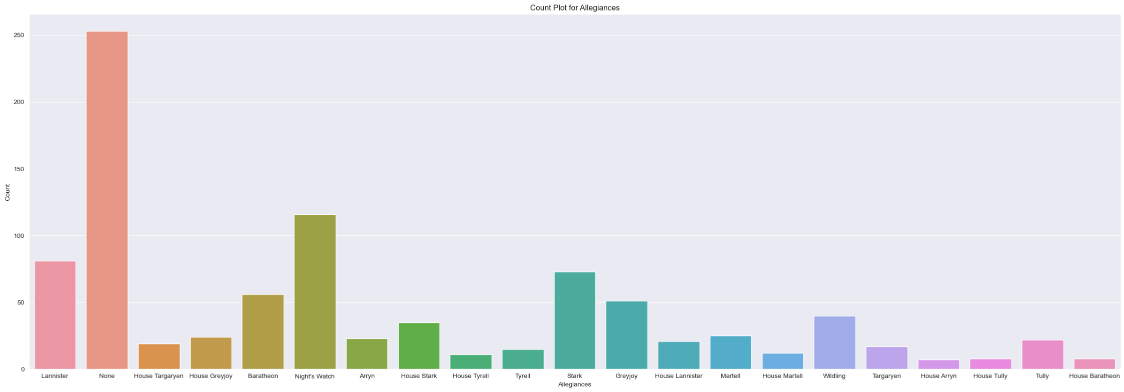
[26]:
```
0    487
1    430
Name: Nobility, dtype: int64
```

[27]:
```
#Deaths
sns.countplot(x=character_deaths["Death Year"])
plt.title("Deaths per Year")
plt.xlabel("Death Year")
plt.ylabel("Deaths")
plt.show()
```



[28]:

```
#Allegiances
plt.rcParams["figure.figsize"] = (30, 10)
sns.countplot(x=character_deaths["Allegiances"])
plt.title("Count Plot for Allegiances")
plt.ylabel("Count")
plt.show()
```



[ ]:

```

```