

```
In [22]: # matplotlib
!pip install seaborn
```

```
Requirement already satisfied: seaborn in c:\programdata\anaconda3\lib\site-packages (0.12.2)
Requirement already satisfied: numpy!=1.24.0,>=1.17 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (1.24.3)
Requirement already satisfied: pandas>=0.25 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (2.0.3)
Requirement already satisfied: matplotlib!=3.6.1,>=3.1 in c:\programdata\anaconda3\lib\site-packages (from seaborn) (3.7.2)
Requirement already satisfied: contourpy>=1.0.1 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.0.5)
Requirement already satisfied: cycler>=0.10 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (0.11.0)
Requirement already satisfied: fonttools>=4.22.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (4.25.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (1.4.4)
Requirement already satisfied: packaging>=20.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (23.1)
Requirement already satisfied: pillow>=6.2.0 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (9.4.0)
Requirement already satisfied: pyparsing<3.1,>=2.3.1 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (3.0.9)
Requirement already satisfied: python-dateutil>=2.7 in c:\programdata\anaconda3\lib\site-packages (from matplotlib!=3.6.1,>=3.1->seaborn) (2.8.2)
Requirement already satisfied: pytz>=2020.1 in c:\programdata\anaconda3\lib\site-packages (from pandas>=0.25->seaborn) (2023.3.post1)
Requirement already satisfied: tzdata>=2022.1 in c:\programdata\anaconda3\lib\site-packages (from pandas>=0.25->seaborn) (2023.3)
Requirement already satisfied: six>=1.5 in c:\programdata\anaconda3\lib\site-packages (from python-dateutil>=2.7->matplotlib!=3.6.1,>=3.1->seaborn) (1.16.0)
DEPRECATION: Loading egg at c:\programdata\anaconda3\lib\site-packages\vbboxapi-1.0-py3.11.egg is deprecated. pip 23.3 will enforce this behaviour change. A possible replacement is to use pip for package installation..
```

```
In [23]: import pandas as pd

pd.set_option('display.max_rows', 100)
pd.set_option('display.max_columns', None)
pd.set_option('display.width', None)
pd.set_option('display.max_colwidth', None)
```

```
In [24]: import matplotlib.pyplot as plt
import seaborn as sns

sns.set(style='dark')
```

```
In [25]: import pickle

with open('df_jogos.pkl', 'rb') as pkl_file:
    df = pickle.load(pkl_file)
```

```
In [26]: df.head()
```

Out[26]:

	Nome	Preço	Jogadores Atuais	Pico de Jogadores
0	Counter-Strike 2	0	1276439	1281517
1	PUBG: BATTLEGROUNDS	0	683073	683073
2	Dota 2	0	624160	641741
3	Banana	0	427114	436877
4	NARAKA: BLADEPOINT	0	263787	295439

In [27]: `df.dtypes`

```
Out[27]: Nome                object
Preço                object
Jogadores Atuais    object
Pico de Jogadores    object
dtype: object
```

```
In [28]: df['Preço'] = df['Preço'].astype(float)
df['Jogadores Atuais'] = df['Jogadores Atuais'].str.replace('.', '', regex=False).astype(int)
df['Pico de Jogadores'] = df['Pico de Jogadores'].str.replace('.', '', regex=False).astype(int)
df.dtypes
```

```
Out[28]: Nome                object
Preço                float64
Jogadores Atuais    int32
Pico de Jogadores    int32
dtype: object
```

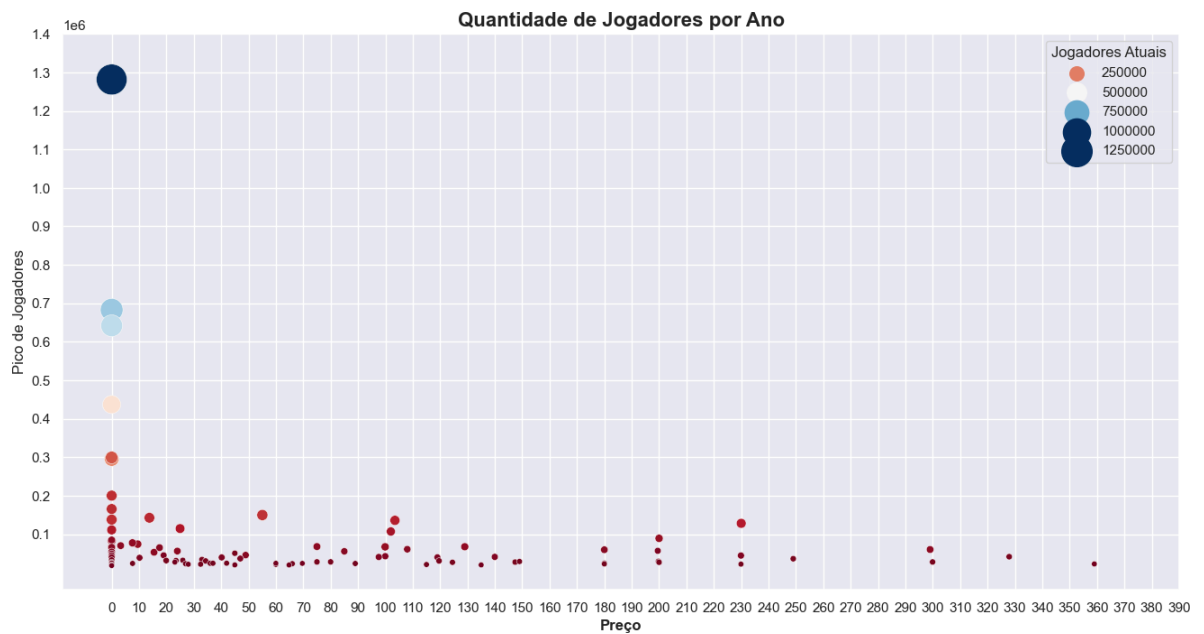
```
In [29]: plt.figure(figsize=(16, 8))

sns.scatterplot(df, x='Preço', y='Pico de Jogadores',
                hue='Jogadores Atuais', palette='RdBu',
                size='Jogadores Atuais', hue_norm=(1000, 1000000), sizes=(20, 600))

# regression (regressão Logística)
#sns.regplot(df, x='Preço', y='Pico de Jogadores', scatter=False, color='crimson')

plt.yticks(ticks=range(100000, 1500000, 100000))
plt.xticks(ticks=range(0, 400, 10))
plt.ylabel('Pico de Jogadores')
plt.xlabel('Preço', fontsize=12, fontweight='bold')
plt.title('Quantidade de Jogadores por Ano', fontsize=16, fontweight='bold')

plt.grid()
plt.show()
```

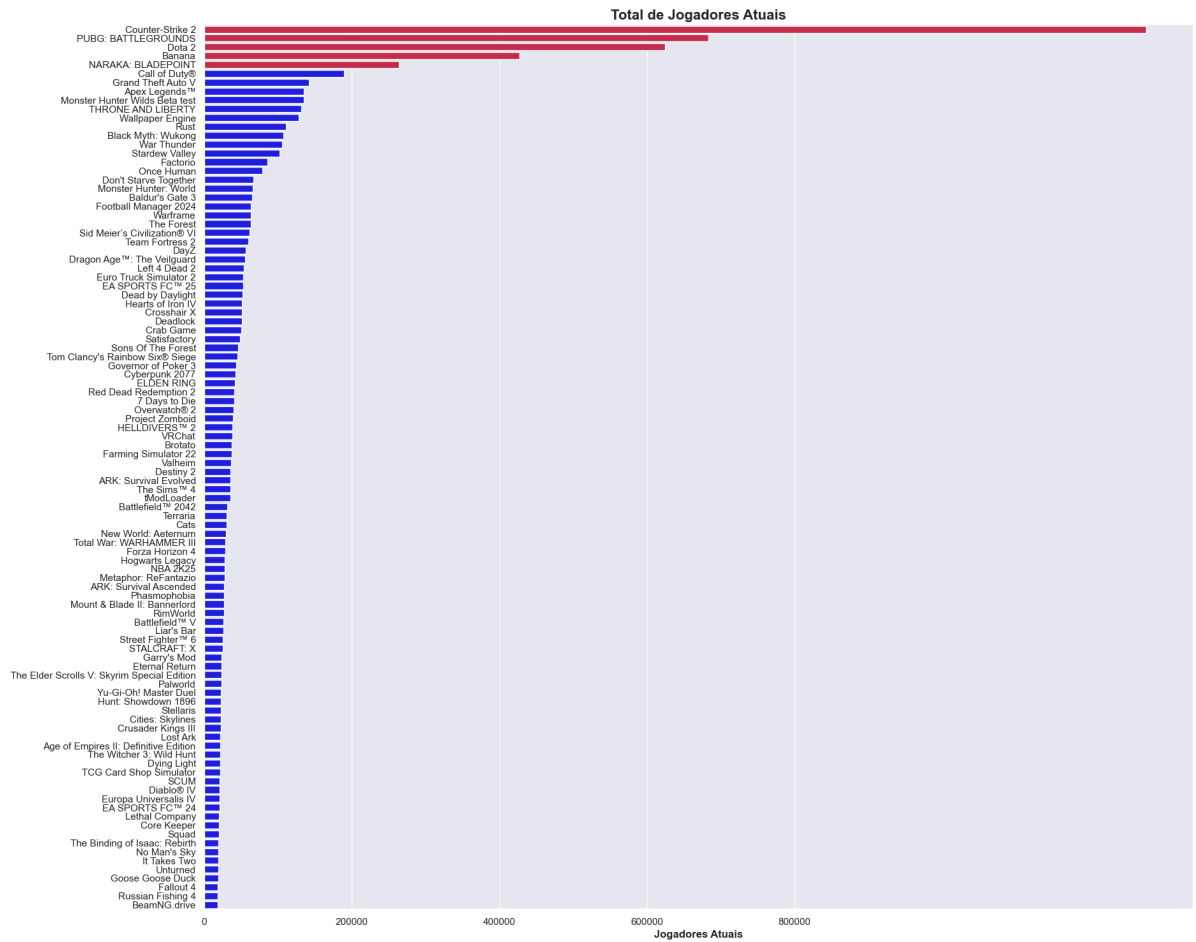


```
In [40]: plt.figure(figsize=(20, 18))

# Criar o gráfico de barras horizontal
colors = ['crimson' if i < 5 else 'blue' for i in range(len(df))]
sns.barplot(data=df,
            y='Nome',
            x='Jogadores Atuais',
            palette=colors)

# Configurar os ticks e os rótulos do gráfico
plt.xticks(ticks=range(0, 1000000, 200000))
plt.xlabel('Jogadores Atuais', fontsize=12, fontweight='bold')
plt.ylabel('')
plt.title('Total de Jogadores Atuais', fontsize=16, fontweight='bold')

plt.grid(axis='x')
plt.show()
```

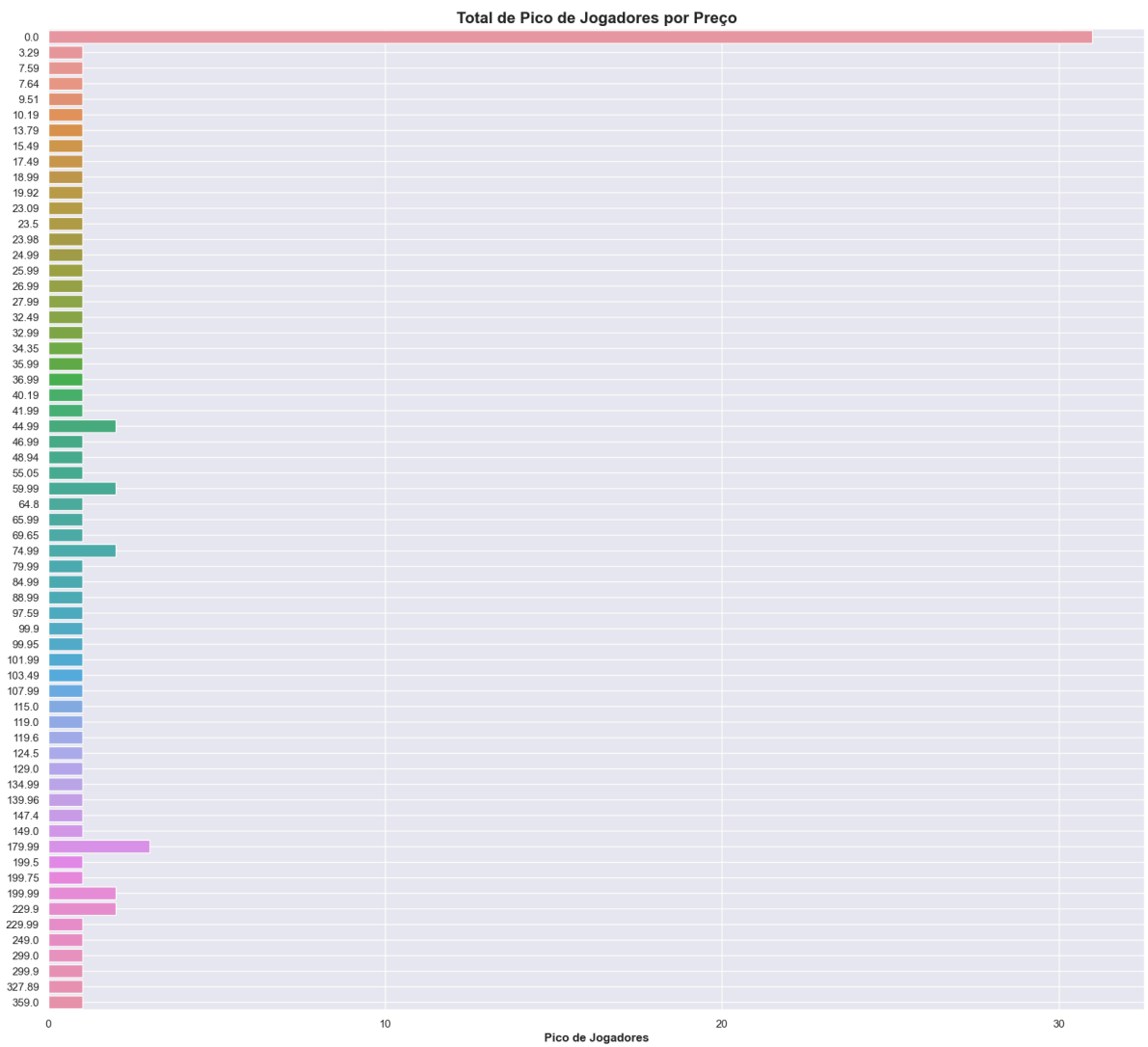


```
In [46]: plt.figure(figsize=(20, 18))

# value_counts
sns.countplot(df,
               y='Preço', orient='y')

plt.xticks(ticks=range(0, 40, 10))
plt.ylabel('')
plt.xlabel('Pico de Jogadores', fontsize=12, fontweight='bold')
plt.title('Total de Pico de Jogadores por Preço', fontsize=16, fontweight='bold')

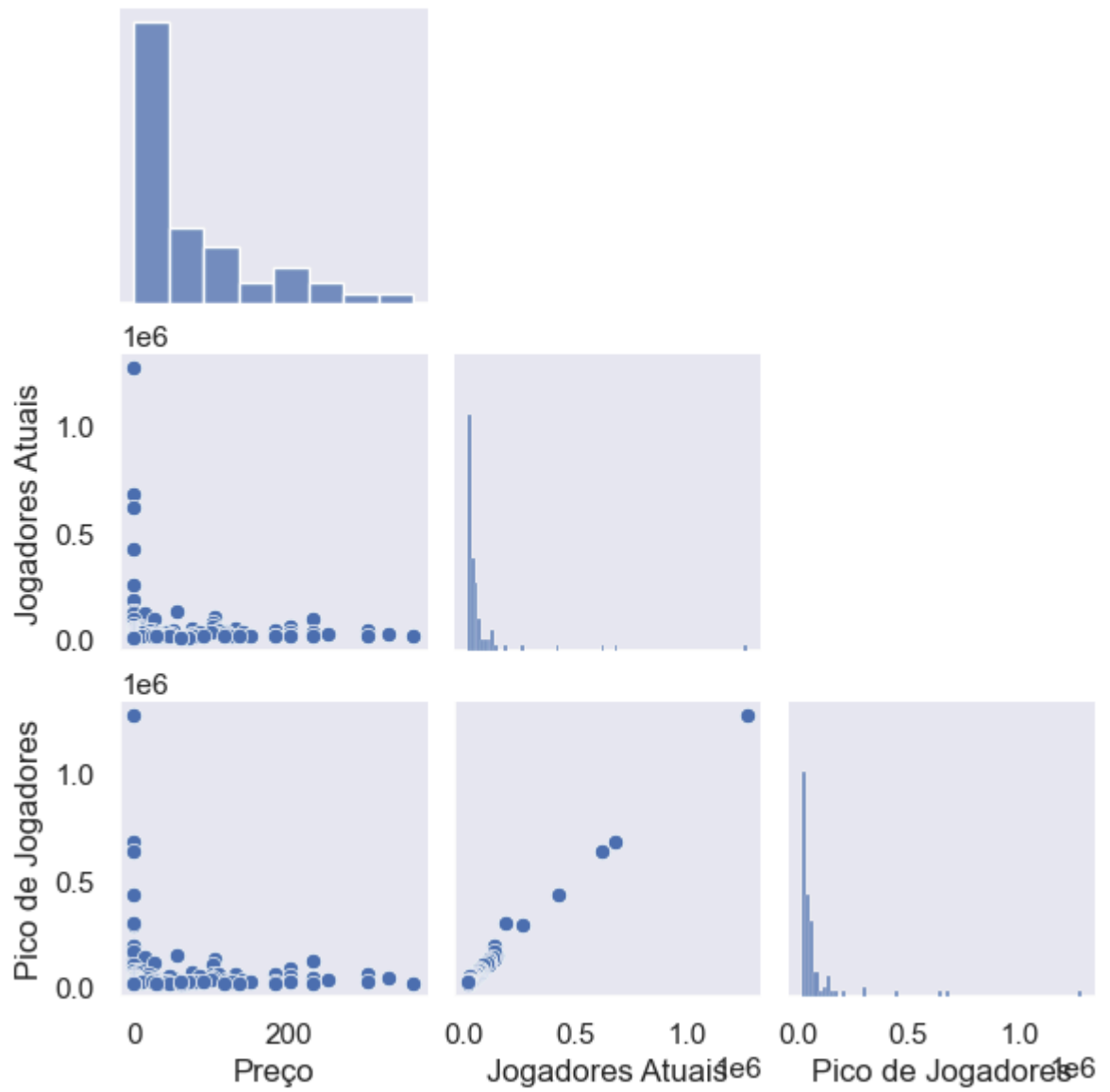
plt.grid()
plt.show()
```



In [31]: `sns.pairplot(df, corner=True, height=2.0)`

C:\ProgramData\anaconda3\Lib\site-packages\seaborn\axisgrid.py:118: UserWarning: The figure layout has changed to tight
 self._figure.tight_layout(*args, **kwargs)
 <seaborn.axisgrid.PairGrid at 0x1a3214c6f90>

Out[31]:



```
In [47]: !pip install itables
```

Requirement already satisfied: itables in c:\programdata\anaconda3\lib\site-packages (2.2.2)

Requirement already satisfied: ipython in c:\programdata\anaconda3\lib\site-packages (from itables) (8.15.0)

Requirement already satisfied: numpy in c:\programdata\anaconda3\lib\site-packages (from itables) (1.24.3)

Requirement already satisfied: pandas in c:\programdata\anaconda3\lib\site-packages (from itables) (2.0.3)

Requirement already satisfied: backcall in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.2.0)

Requirement already satisfied: decorator in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (5.1.1)

Requirement already satisfied: jedi<=0.16 in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.18.1)

Requirement already satisfied: matplotlib-inline in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.1.6)

Requirement already satisfied: pickleshare in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.7.5)

Requirement already satisfied: prompt-toolkit!=3.0.37,<3.1.0,>=3.0.30 in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (3.0.36)

Requirement already satisfied: pygments>=2.4.0 in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (2.15.1)

Requirement already satisfied: stack-data in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.2.0)

Requirement already satisfied: traitlets>=5 in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (5.7.1)

Requirement already satisfied: colorama in c:\programdata\anaconda3\lib\site-packages (from ipython->itables) (0.4.6)

Requirement already satisfied: python-dateutil>=2.8.2 in c:\programdata\anaconda3\lib\site-packages (from pandas->itables) (2.8.2)

Requirement already satisfied: pytz>=2020.1 in c:\programdata\anaconda3\lib\site-packages (from pandas->itables) (2023.3.post1)

Requirement already satisfied: tzdata>=2022.1 in c:\programdata\anaconda3\lib\site-packages (from pandas->itables) (2023.3)

Requirement already satisfied: parso<0.9.0,>=0.8.0 in c:\programdata\anaconda3\lib\site-packages (from jedi>=0.16->ipython->itables) (0.8.3)

Requirement already satisfied: wcwidth in c:\programdata\anaconda3\lib\site-packages (from prompt-toolkit!=3.0.37,<3.1.0,>=3.0.30->ipython->itables) (0.2.5)

Requirement already satisfied: six>=1.5 in c:\programdata\anaconda3\lib\site-packages (from python-dateutil>=2.8.2->pandas->itables) (1.16.0)

Requirement already satisfied: executing in c:\programdata\anaconda3\lib\site-packages (from stack-data->ipython->itables) (0.8.3)

Requirement already satisfied: asttokens in c:\programdata\anaconda3\lib\site-packages (from stack-data->ipython->itables) (2.0.5)

Requirement already satisfied: pure-eval in c:\programdata\anaconda3\lib\site-packages (from stack-data->ipython->itables) (0.2.2)

DEPRECATION: Loading egg at c:\programdata\anaconda3\lib\site-packages\vbboxapi-1.0-py3.11.egg is deprecated. pip 23.3 will enforce this behaviour change. A possible replacement is to use pip for package installation..

```
In [48]: from itables import init_notebook_mode, show
init_notebook_mode(all_interactive=True)
```



This is the `init_notebook_mode` cell from ITables v2.2.2




(you should not see this message - is your notebook trusted?)

```
In [49]: import pandas as pd

pd.set_option('display.max_rows', 100)
pd.set_option('display.max_columns', None)
```

```
pd.set_option('display.width', None)
pd.set_option('display.max_colwidth', None)
```

```
In [50]: show(df,
            layout={'bottom1': 'searchPanels'},
            searchPanels={'layout': 'columns-5', 'cascadePanels': True},
            buttons=['copyHtml5', 'csvHtml5', 'excelHtml5'])
```

	Nome	Preço	Jogadores Atuais	Pico de Jogadores
	Loading ITables v2.2.2 from the init_notebook_mode cell... (need help?)			

```
In [ ]:
```