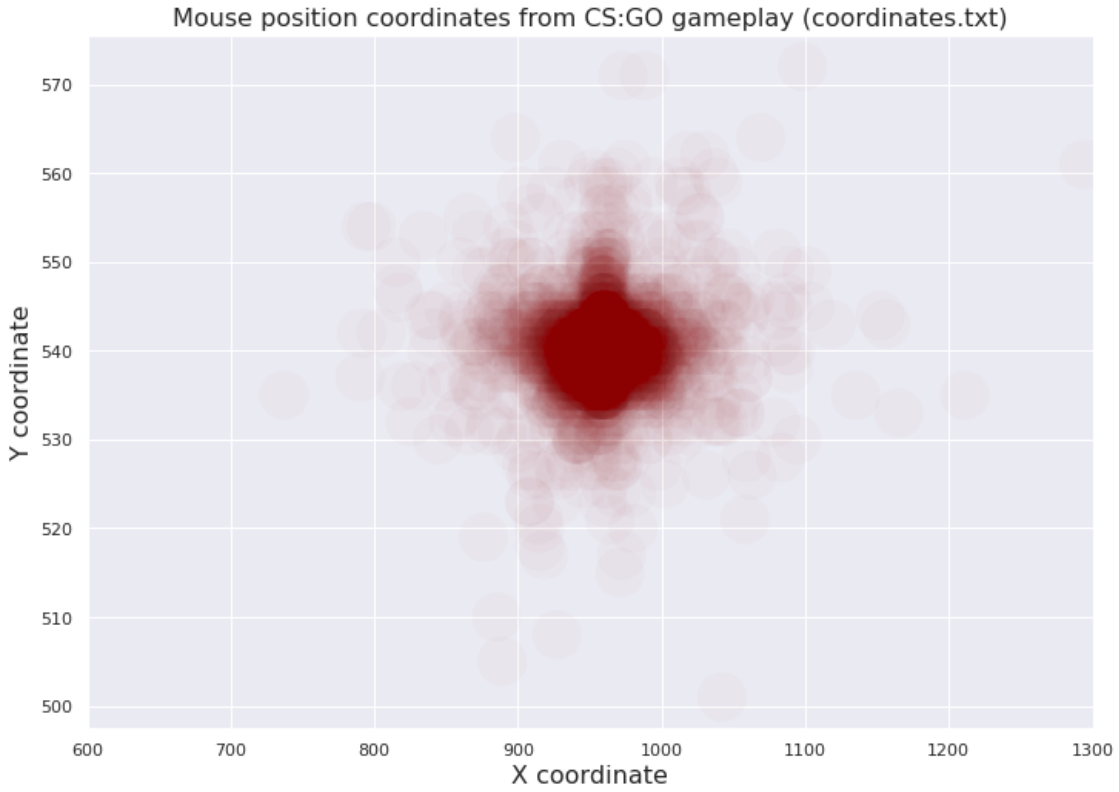
entropyVis

December 11, 2021

[2]:
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
import numpy as np
import matplotlib.ticker as ticker
from datetime import datetime as dt
import altair as alt

%matplotlib inline
```

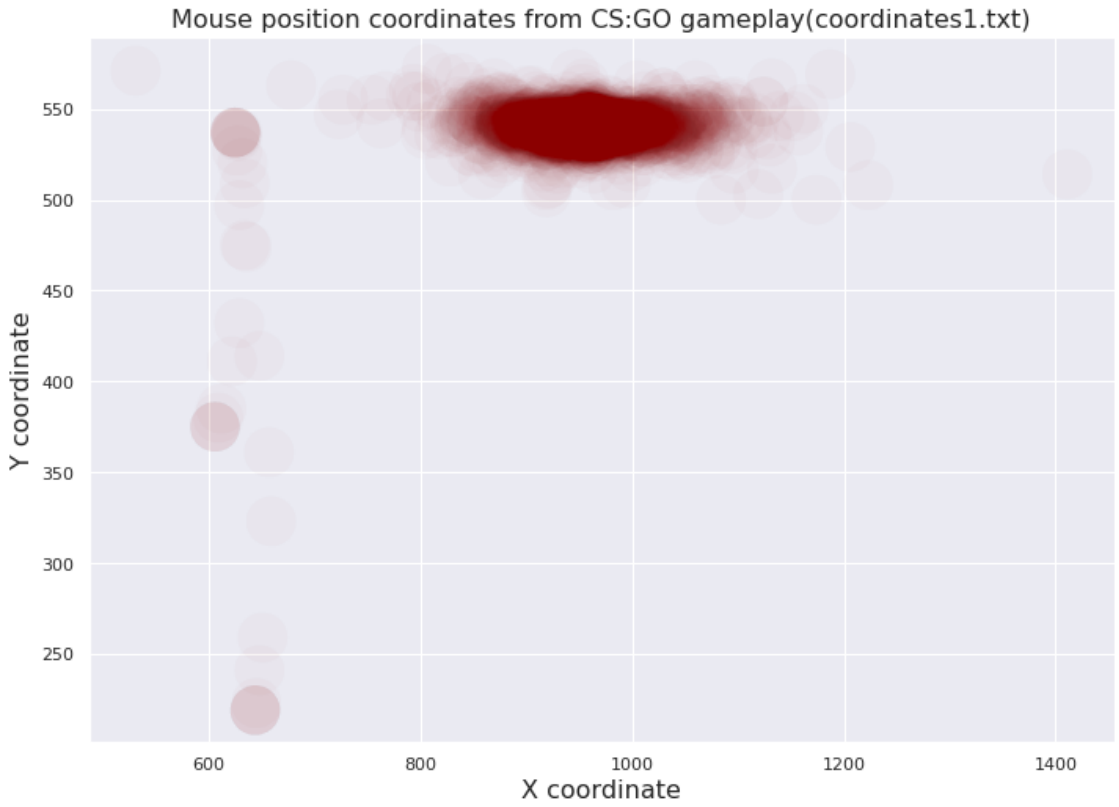
[12]:
```
all_df = pd.read_excel('coordinates.xlsx')

plt.xlim(600, 1300)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .02, edgecolor =␣
 ↪'none', color = 'darkred', s = 1000)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coordinates from CS:GO gameplay (coordinates.
 ↪txt)', fontsize=16)
```

[12]:
```
Text(0.5, 1.0, 'Mouse position coordinates from CS:GO gameplay
(coordinates.txt)')
```



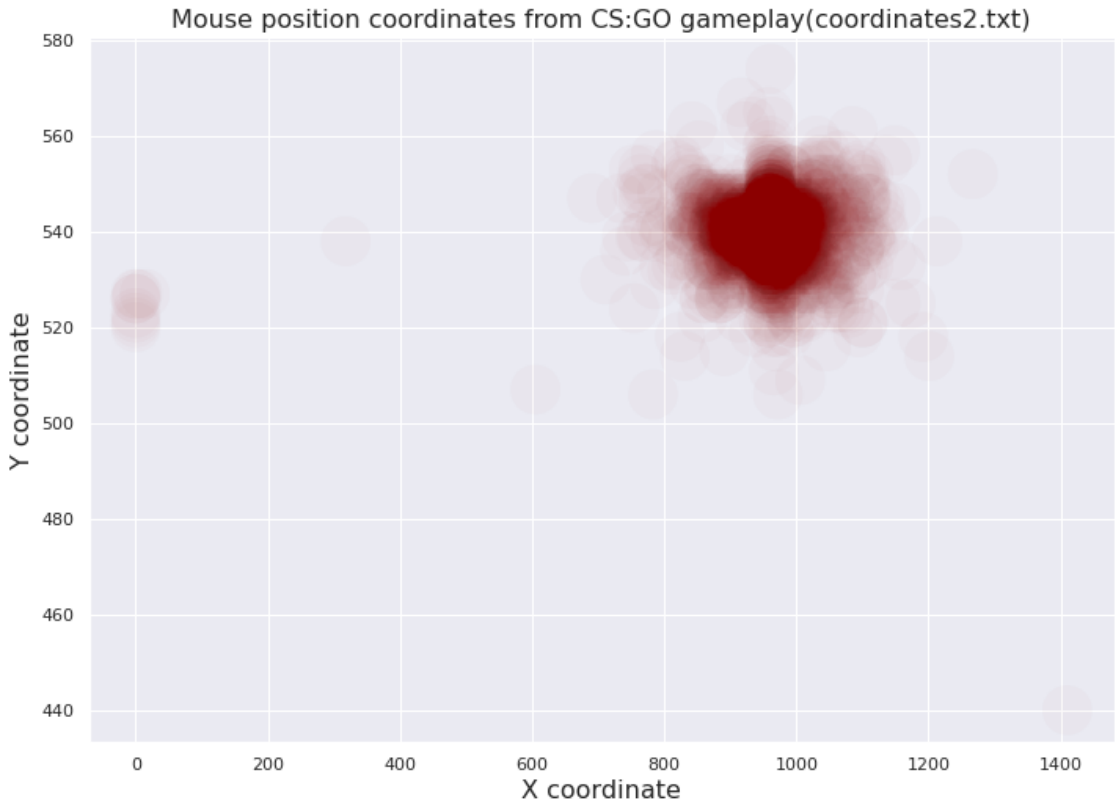
[13]:
```
all_df = pd.read_excel('coordinates1.xlsx')


sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .02, edgecolor =␣
↪'none', color = 'darkred', s = 1000)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coordinates from CS:GO gameplay(coordinates1.
↪txt)', fontsize=16)
```

[13]:
```
Text(0.5, 1.0, 'Mouse position coordinates from CS:GO
gameplay(coordinates1.txt)')
```



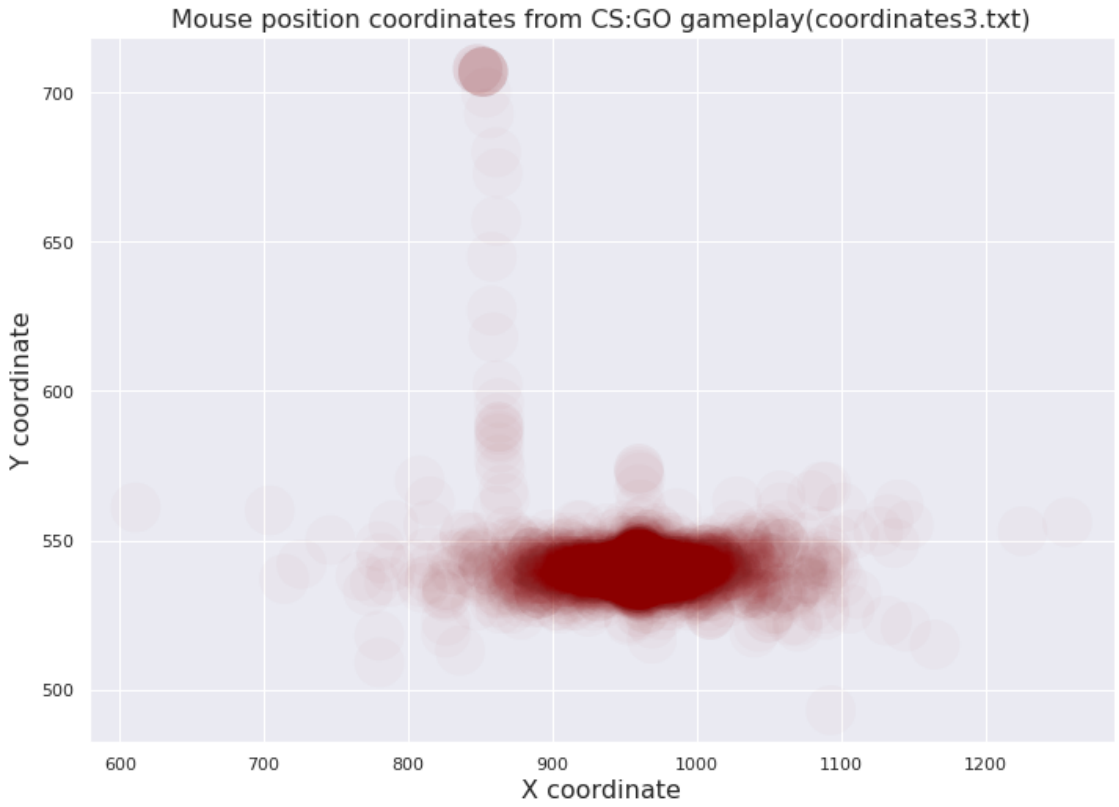
[14]:
```
all_df = pd.read_excel('coordinates2.xlsx')

sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .02, edgecolor =␣
↪'none', color = 'darkred', s = 1000)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coordinates from CS:GO gameplay(coordinates2.
↪txt)', fontsize=16)
```

[14]:
```
Text(0.5, 1.0, 'Mouse position coordinates from CS:GO
gameplay(coordinates2.txt)')
```



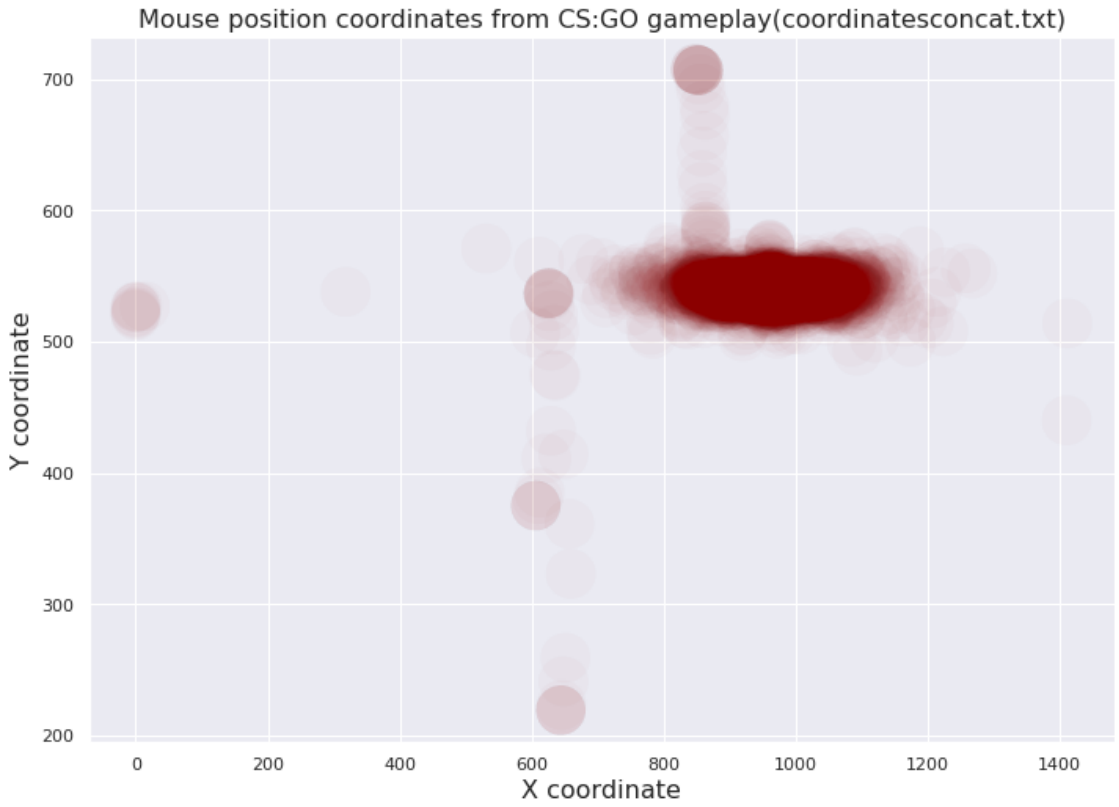
[15]:
```
all_df = pd.read_excel('coordinates3.xlsx')

sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .02, edgecolor =␣
↪'none', color = 'darkred', s = 1000)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coordinates from CS:GO gameplay(coordinates3.
↪txt)', fontsize=16)
```

[15]:
```
Text(0.5, 1.0, 'Mouse position coordinates from CS:GO
gameplay(coordinates3.txt)')
```



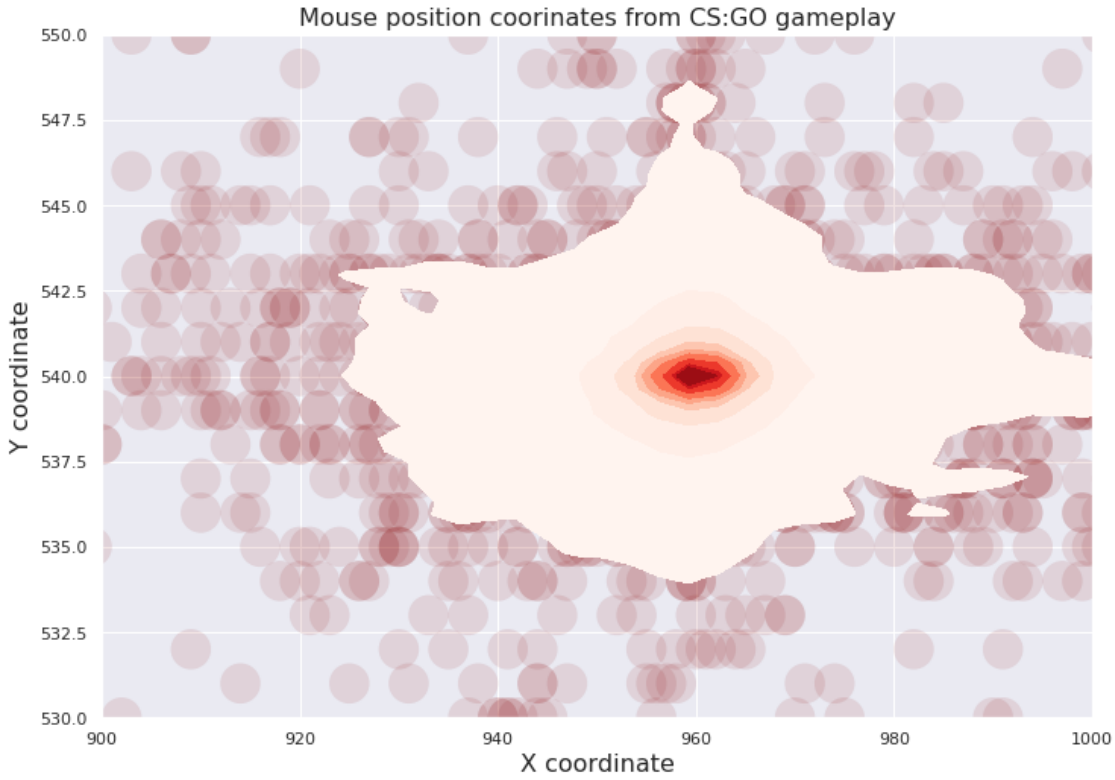
[16]:
```
all_df = pd.read_excel('coordinatesconcat.xlsx')

sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .02, edgecolor =␣
↪'none', color = 'darkred', s = 1000)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coordinates from CS:GO␣
↪gameplay(coordinatesconcat.txt)', fontsize=16)
```

[16]:
```
Text(0.5, 1.0, 'Mouse position coordinates from CS:GO
gameplay(coordinatesconcat.txt)')
```



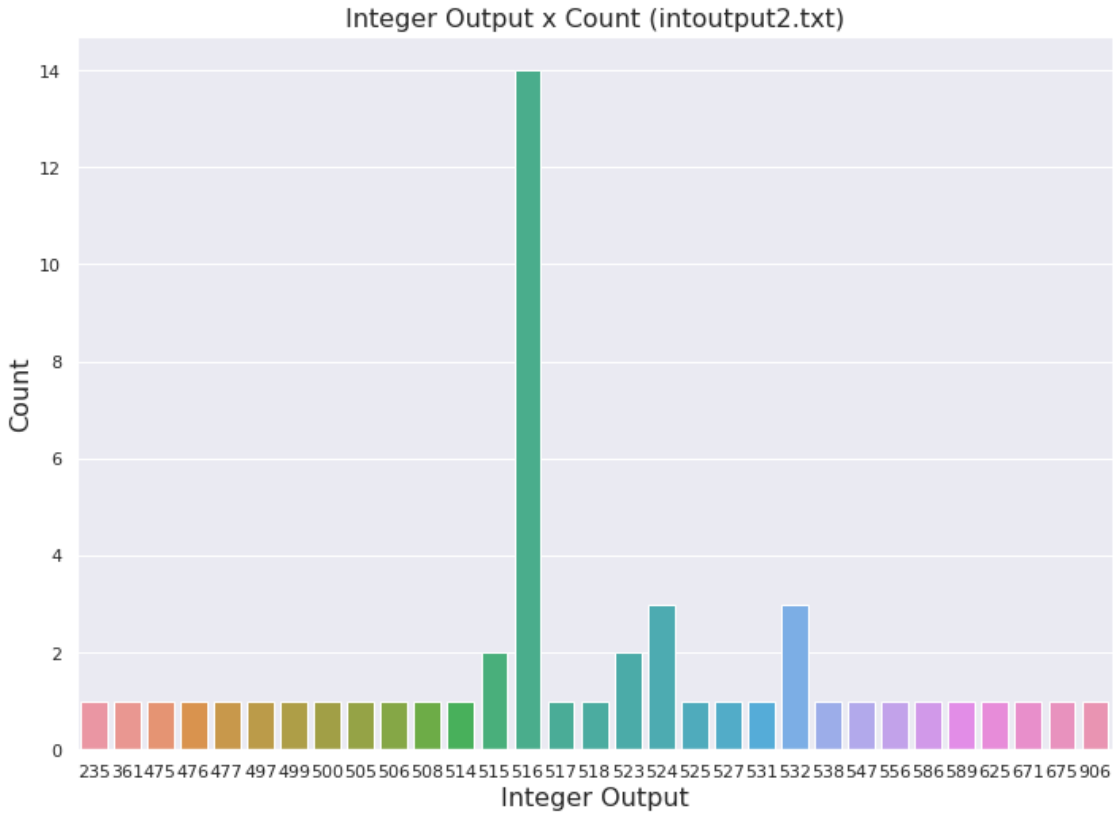
[72]:
```
all_df = pd.read_excel('coordinates.xlsx')
plt.xlim(900, 1000)
plt.ylim(530, 550)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.scatterplot(x='X', y='Y', data=all_df, alpha = .1, edgecolor = 'none',␣
↪color = 'darkred', s = 700)
viz1.set_xlabel('X coordinate', fontsize=16)
viz1.set_ylabel('Y coordinate', fontsize=16)
viz1.set_title('Mouse position coorinates from CS:GO gameplay', fontsize=16)

sns.kdeplot(x='X', y='Y', data=all_df,cmap="Reds",shade=True)
```

[72]:
```
<AxesSubplot:title={'center':'Mouse position coorinates from CS:GO gameplay'},
xlabel='X coordinate', ylabel='Y coordinate'>
```



[12]:
```
all_df = pd.read_excel('intoutput2.xlsx')
vizdf = all_df.sample(50)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput2.txt)', fontsize=16)
```

[12]:
```
Text(0.5, 1.0, 'Integer Output x Count (intoutput2.txt)')
```



[11]:
```
vizdf['output'].tolist()
```

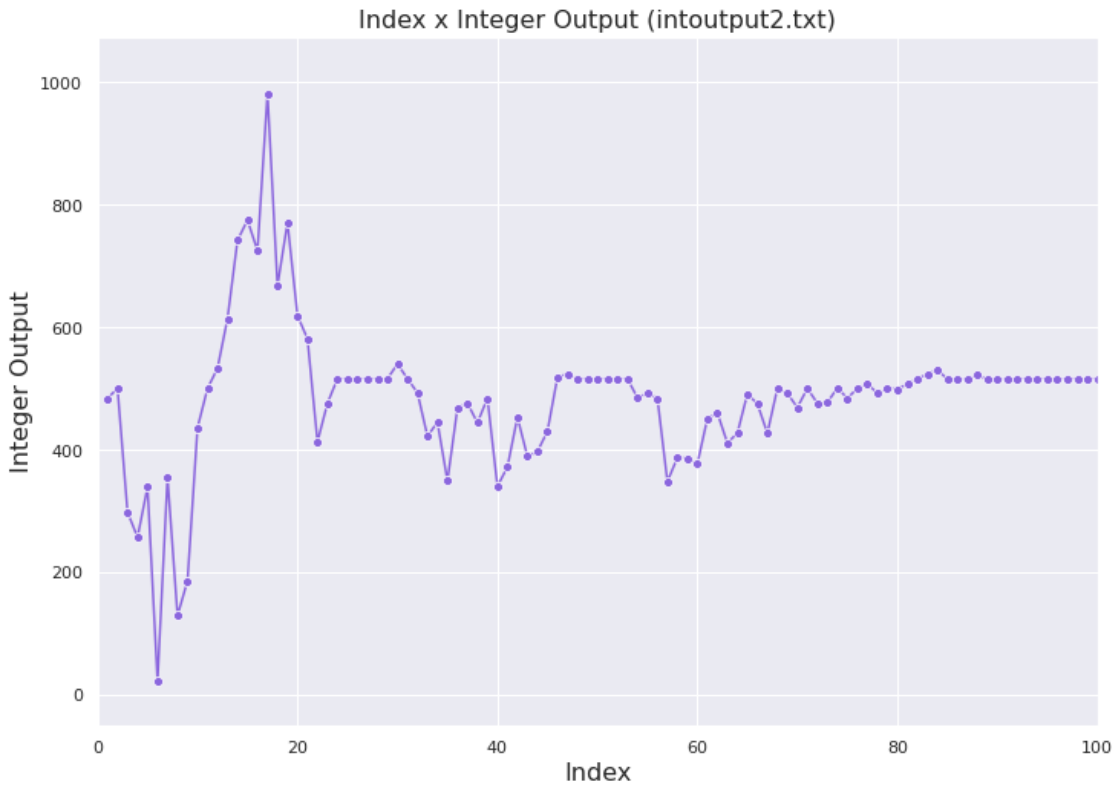
[11]:
```
[540,
 524,
 546,
 508,
 764,
 450,
 548,
 540,
 516,
 525,
 508,
 484,
 518,
 548,
 516,
 516,
 517,
 524,
 174,
```

```
516,
508,
697,
500,
516,
515,
547,
516,
358,
571,
492,
379,
692,
516,
204,
628,
517,
591,
518,
510,
516,
517,
556,
501,
516,
516,
508,
517,
524,
313,
516,
508,
635,
492,
711,
628,
523,
445,
445,
477,
711,
524,
516,
730,
516,
403,
524,
```

```
525,
413,
495,
492,
523,
1005,
366,
516,
532,
516,
821,
517,
508,
516,
508,
524,
508,
516,
532,
516,
515,
516,
516,
657,
517,
532,
492,
508,
996,
517,
516,
516,
524,
516]
```

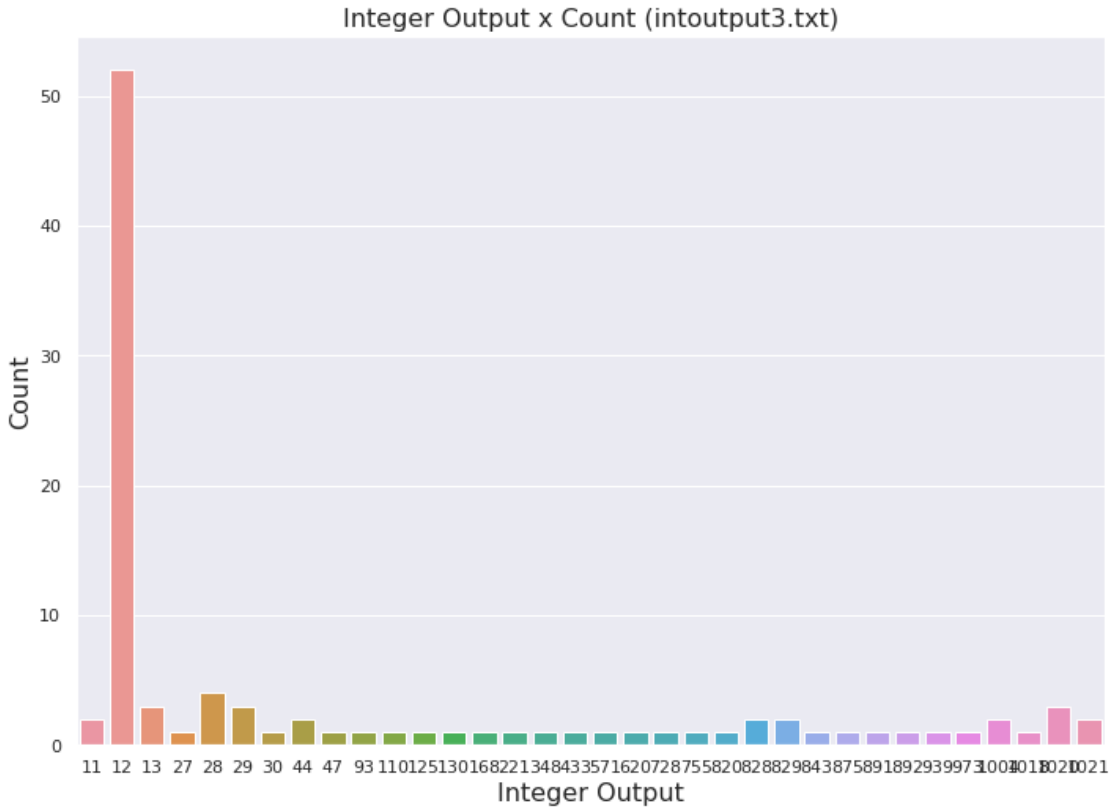
[10]:
```
all_df = pd.read_excel('intoutput2.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput2.txt)', fontsize=16)
```

[10]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput2.txt)')
```



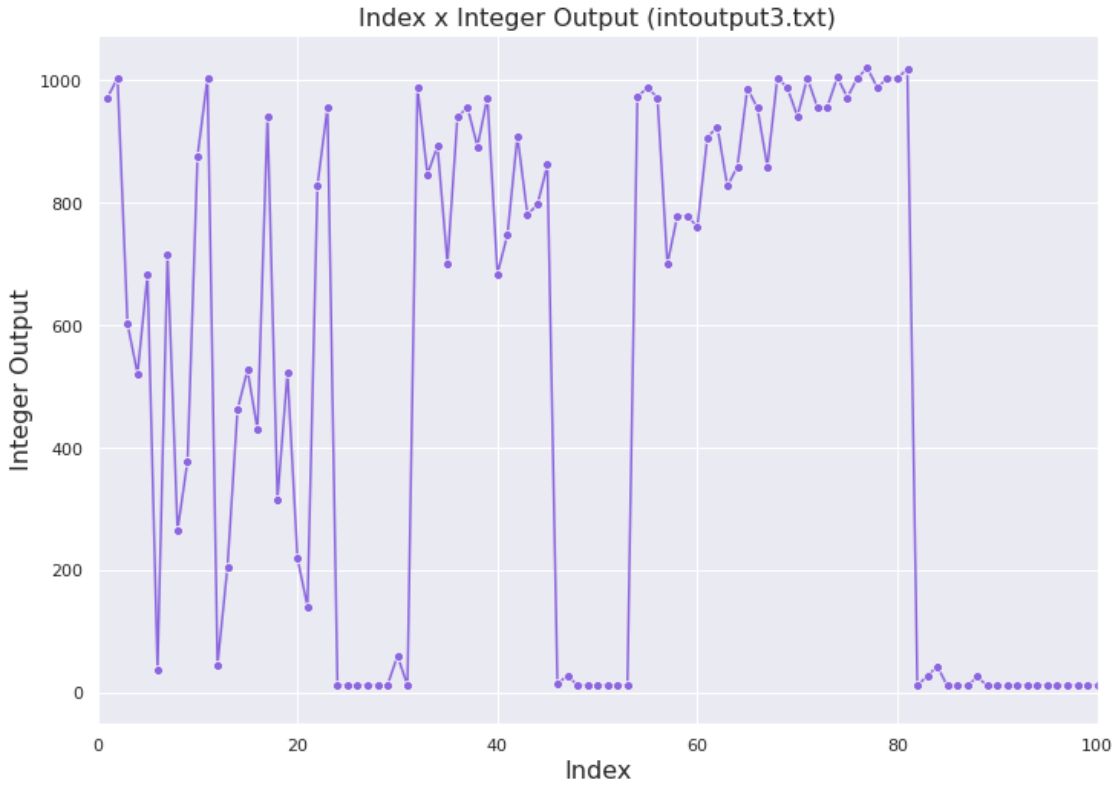
[14]:
```
all_df = pd.read_excel('intoutput3.xlsx')
all_df.sort_values(by=['output'])
vizdf = all_df.tail(100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput3.txt)', fontsize=16)
```

[14]:
```
Text(0.5, 1.0, 'Integer Output x Count (intoutput3.txt)')
```



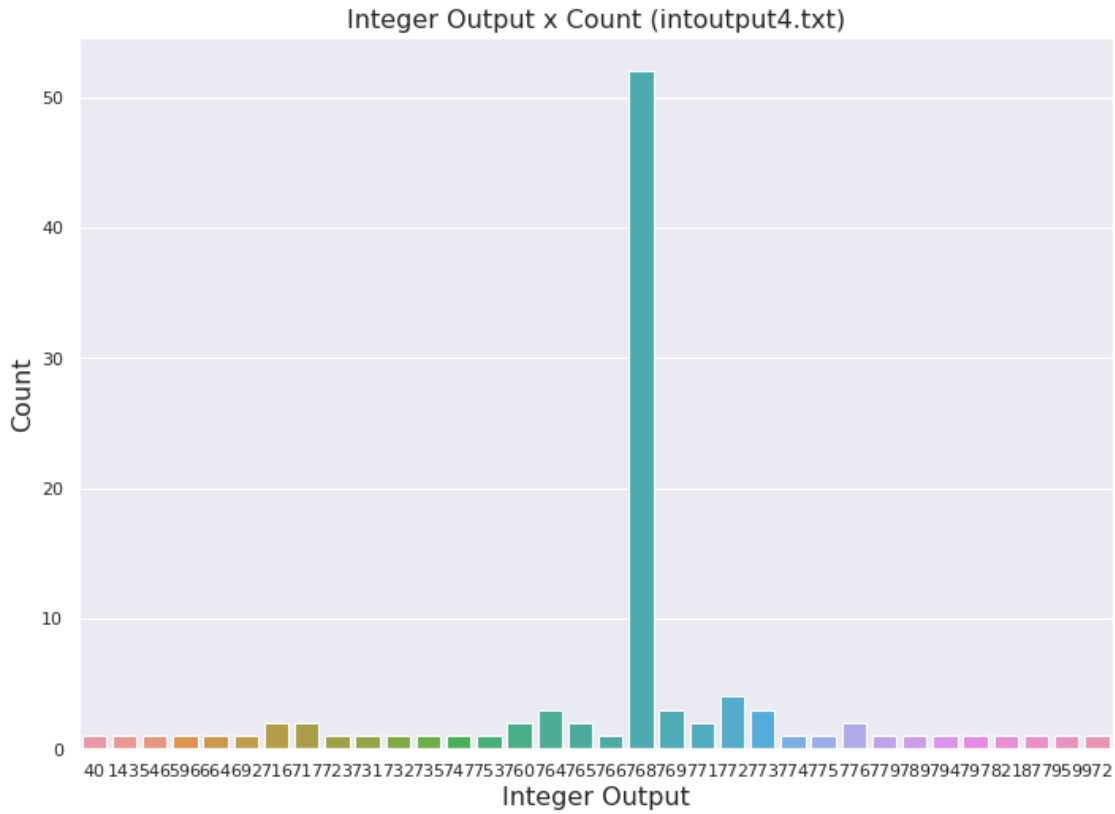
[15]:
```
all_df = pd.read_excel('intoutput3.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput3.txt)', fontsize=16)
```

[15]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput3.txt)')
```



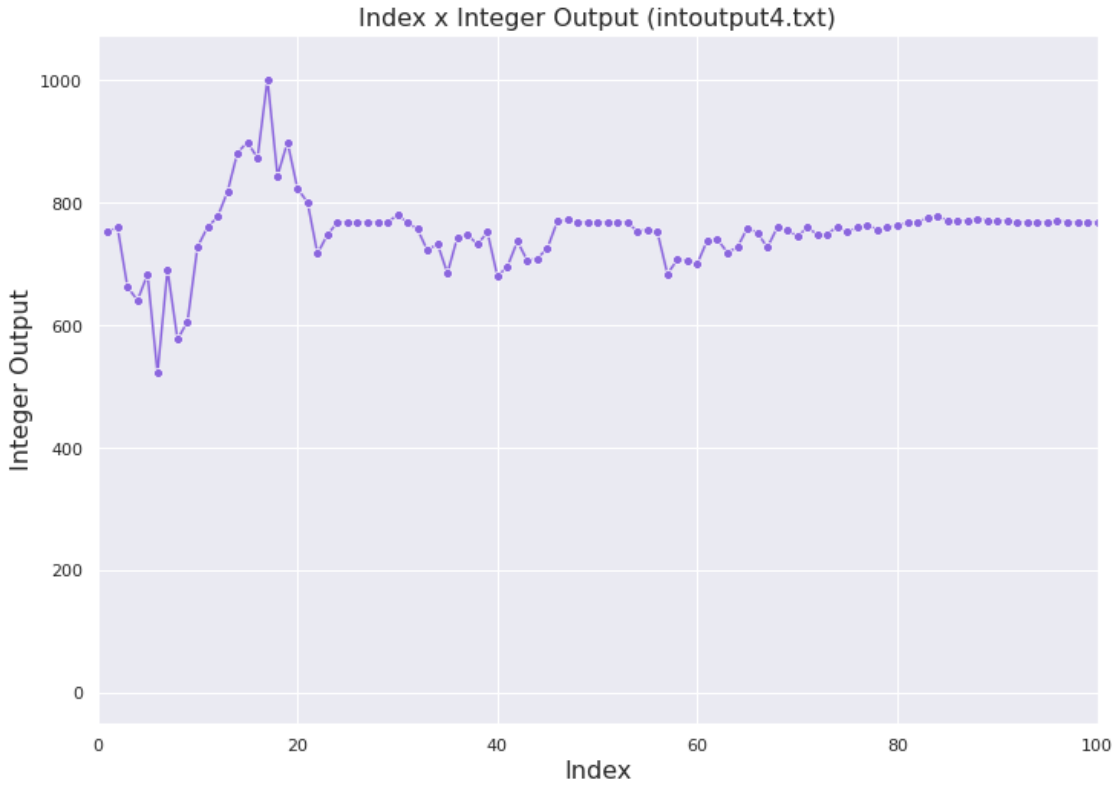
[16]:
```
all_df = pd.read_excel('intoutput4.xlsx')
all_df.sort_values(by=['output'])
vizdf = all_df.tail(100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput4.txt)', fontsize=16)
```

[16]:
```
Text(0.5, 1.0, 'Integer Output x Count (intoutput4.txt)')
```



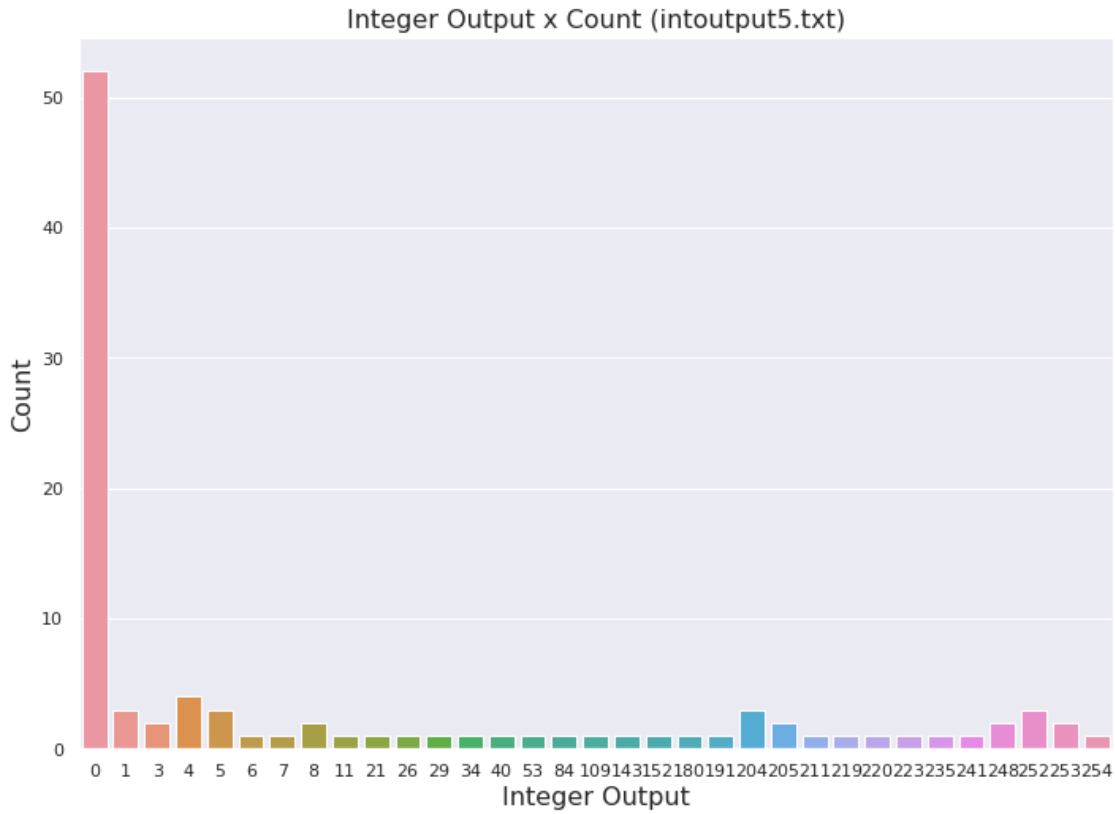
[17]:
```
all_df = pd.read_excel('intoutput4.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput4.txt)', fontsize=16)
```

[17]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput4.txt)')
```



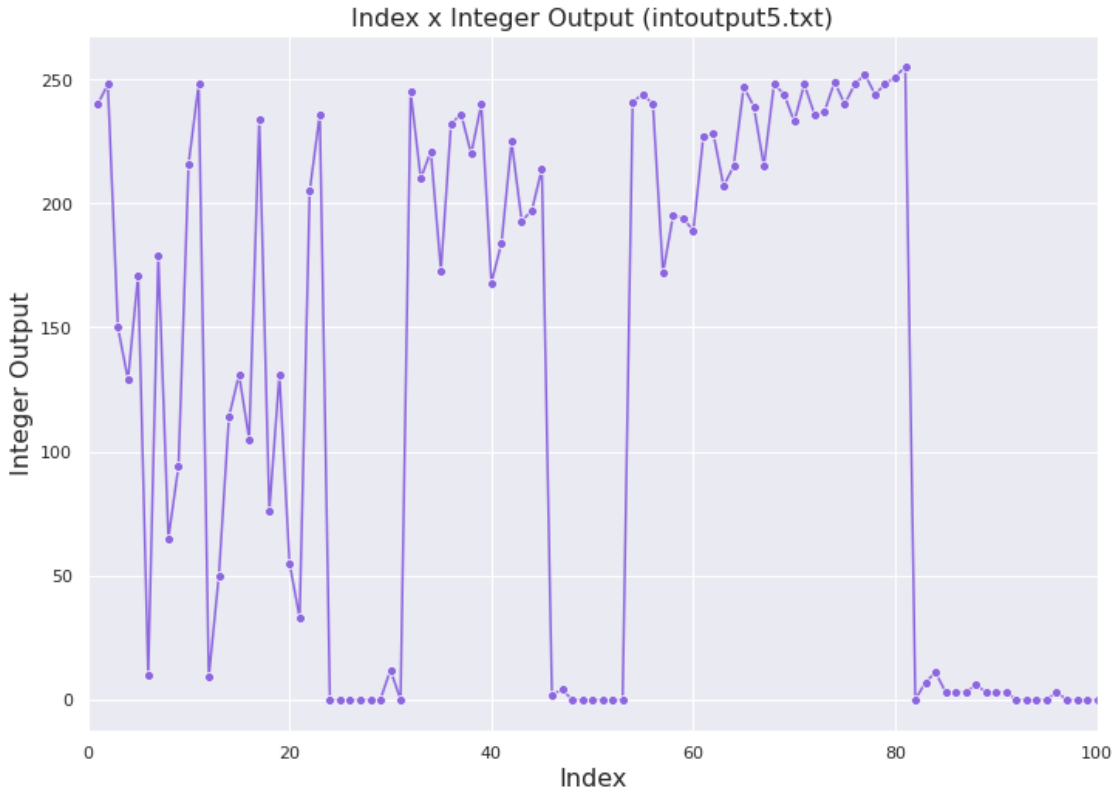
[24]:
```
all_df = pd.read_excel('intoutput5.xlsx')
all_df.sort_values(by=['output'])
vizdf = all_df.tail(100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput5.txt)', fontsize=16)
```

[24]: Text(0.5, 1.0, 'Integer Output x Count (intoutput5.txt)')



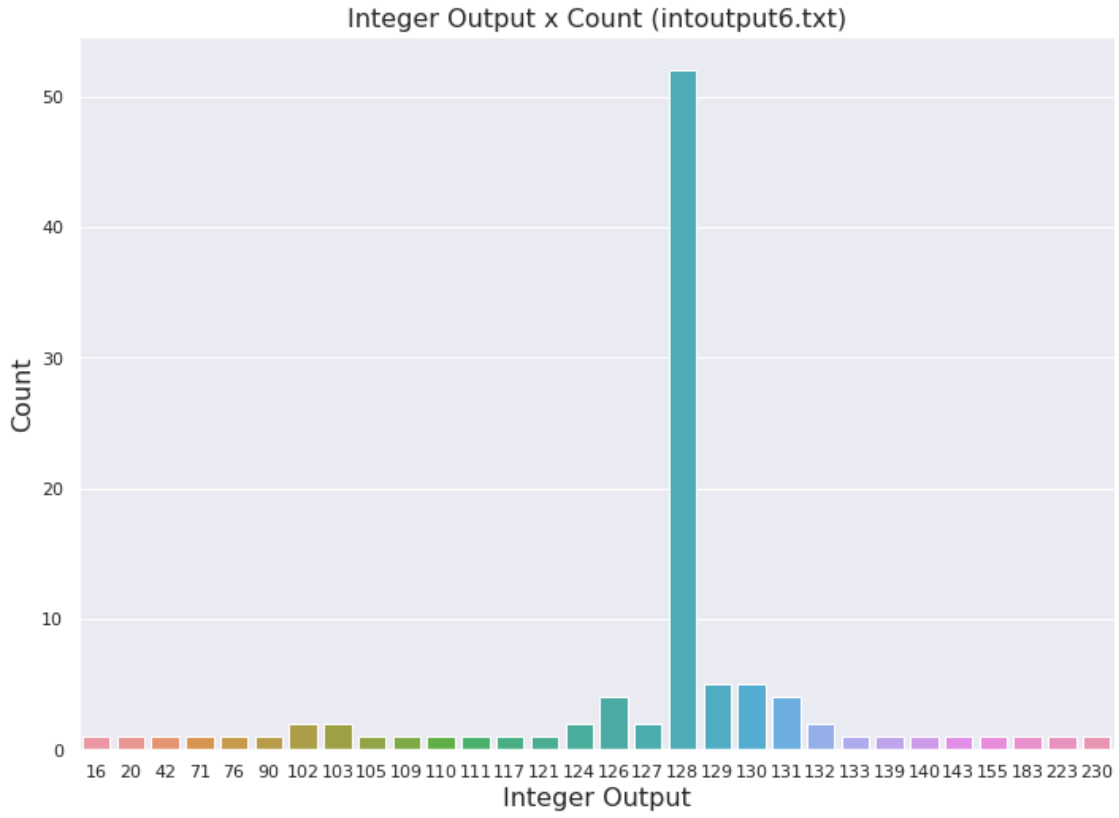
[19]:
```
all_df = pd.read_excel('intoutput5.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput5.txt)', fontsize=16)
```

[19]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput5.txt)')
```



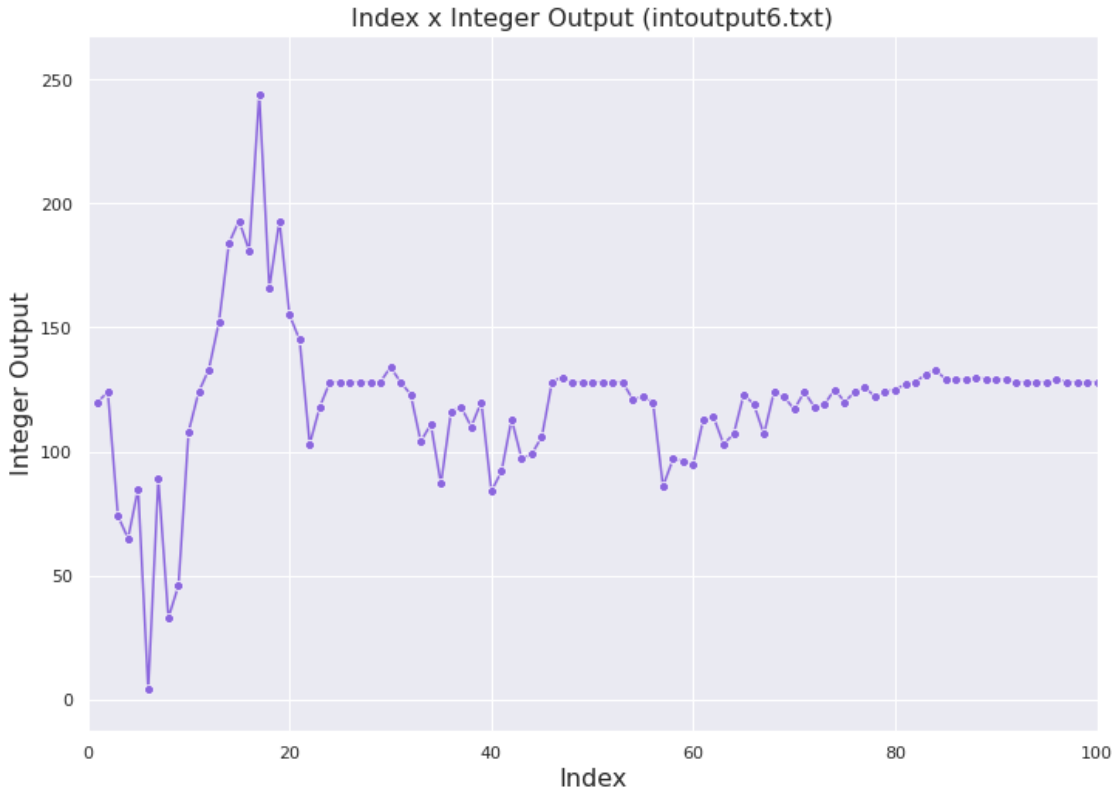
[20]:
```
all_df = pd.read_excel('intoutput6.xlsx')
all_df.sort_values(by=['output'])
vizdf = all_df.tail(100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput6.txt)', fontsize=16)
```

[20]:
```
Text(0.5, 1.0, 'Integer Output x Count (intoutput6.txt)')
```



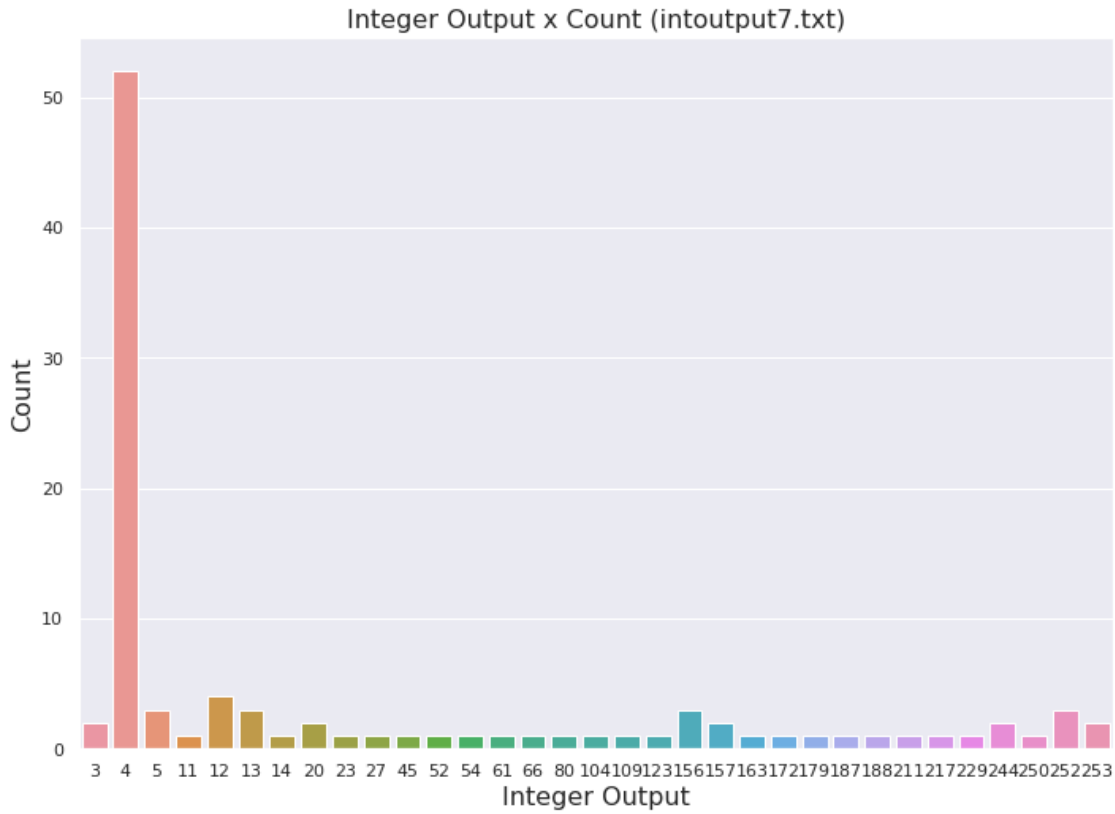
[21]:
```
all_df = pd.read_excel('intoutput6.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput6.txt)', fontsize=16)
```

[21]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput6.txt)')
```



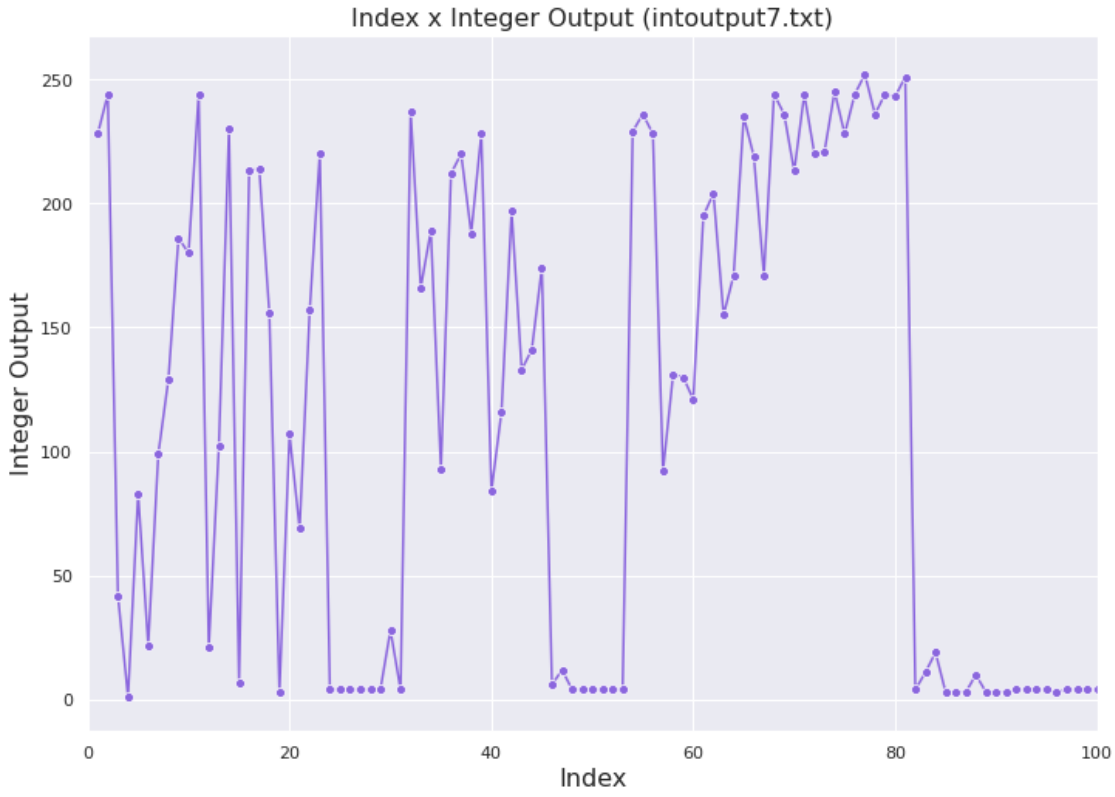
[22]:
```
all_df = pd.read_excel('intoutput7.xlsx')
all_df.sort_values(by=['output'])
vizdf = all_df.tail(100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.countplot(x='output', data=vizdf)
viz1.set_xlabel('Integer Output', fontsize=16)
viz1.set_ylabel('Count', fontsize=16)
viz1.set_title('Integer Output x Count (intoutput7.txt)', fontsize=16)
```

[22]: Text(0.5, 1.0, 'Integer Output x Count (intoutput7.txt)')



[23]:
```
all_df = pd.read_excel('intoutput7.xlsx')
plt.xlim(0, 100)
sns.set(style="darkgrid")
sns.set(rc={'figure.figsize':(11.7,8.27)})
viz1=sns.lineplot(x='X',y='output', data=all_df, color = '#8B66DE', marker =␣
↪"o")
viz1.set_xlabel('Index', fontsize=16)
viz1.set_ylabel('Integer Output', fontsize=16)
viz1.set_title('Index x Integer Output (intoutput7.txt)', fontsize=16)
```

[23]:
```
Text(0.5, 1.0, 'Index x Integer Output (intoutput7.txt)')
```


Index x Integer Output (intoutput7.txt)
Integer Output
Index
0
50
100
150
200
250
0
20
40
60
80
100

[ ]: