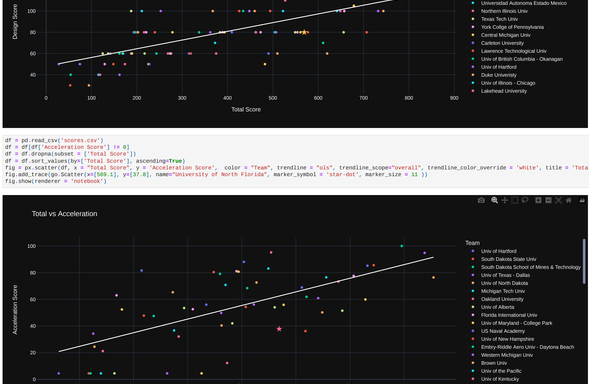
In [47]:
```
import pandas as pd
import plotly.express as px
import plotly.graph_objects as go
df = pd.read_csv('scores.csv')
df.head(18)
```

Out[47]:

	Place	Car Num	Team	Penalty	Cost Score	Presentation Score	Design Score	Acceleration Score	Skid Pad Score	Autocross Score	Endurance Score	Efficiency Score	Total Score
0	1	44	Univ of Illinois - Urbana Champaign	0	87.4	40.1	150	76.4	48.2	121.0	275.0	56.1	854.2
1	2	119	Villanova Univ	0	67.3	58.4	115	94.8	53.1	111.1	238.1	100.0	837.8
2	3	67	Univ of Florida	0	58.7	49.2	135	100.0	40.7	123.4	229.7	58.8	795.5
3	4	54	Kettering Univ	0	66.2	49.1	100	85.6	45.4	121.7	205.0	70.6	743.6
4	5	96	University of Alabama - Tuscaloosa	0	65.1	64.1	100	85.2	59.2	111.7	184.9	61.9	732.1
5	6	52	Purdue Univ - W Lafayette	0	72.6	74.8	135	59.9	66.2	109.5	140.0	64.4	728.4
6	7	68	Louisiana State Univ	0	65.2	53.6	80	77.6	70.8	117.7	184.9	57.0	706.7
7	8	115	Univ of Akron	0	69.7	47.7	115	51.5	30.9	94.9	211.8	64.1	685.7
8	9	48	North Carolina State Univ - Raleigh	0	74.5	60.5	105	73.3	57.1	57.4	190.8	60.1	678.6
9	10	104	Univ of Connecticut	0	80.3	32.2	100	0.0	40.3	123.2	233.3	46.3	657.5
10	11	55	Oklahoma State Univ	0	75.2	40.7	80	76.5	33.3	90.4	173.0	86.8	656.0
11	12	65	Univ of Nebraska - Lincoln	0	77.2	40.4	100	50.2	44.0	100.6	189.3	46.8	648.6
12	13	106	Univ of Waterloo	0	77.4	72.7	100	60.9	23.0	99.9	134.3	73.0	641.1
13	14	83	Hope College	0	71.0	46.4	60	61.9	48.0	79.3	187.8	65.2	619.7
14	15	146	Technische Universitat Berlin	0	79.5	71.5	148	36.2	75.0	123.5	7.0	76.9	617.6
15	16	95	Saginaw Valley State Univ	0	52.0	50.6	70	68.9	45.9	103.2	173.7	46.5	610.8
16	17	63	Univ of Kansas - Lawrence	0	40.3	67.0	80	55.9	8.0	95.4	187.5	43.2	577.3
17	18	150	Univ of North Florida	0	61.1	42.9	80	37.8	54.8	87.8	155.1	49.7	569.1

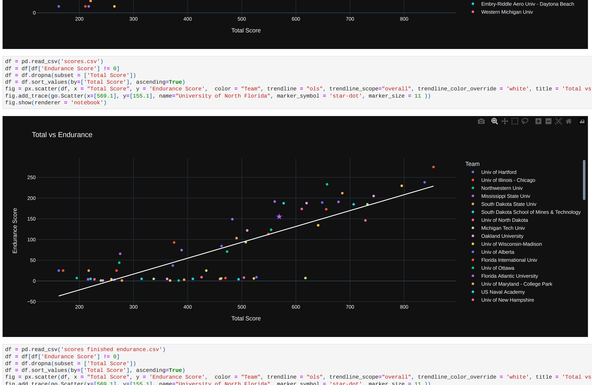
In [34]:
```
df = df[df['Cost Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Cost Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Cost', )
fig.add_trace(go.Scatter(x=[569.1], y=[61.1], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```

In [37]:
```
df = pd.read_csv('scores.csv')
df = df[df['Presentation Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Presentation Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Presentation', )
fig.add_trace(go.Scatter(x=[569.1], y=[42.9], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```

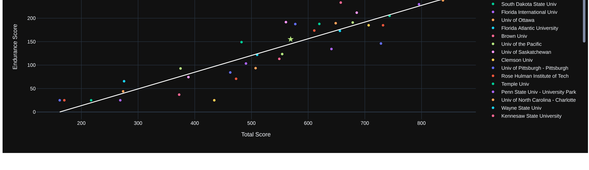


In [38]:
```
df = pd.read_csv('scores.csv')
df = df[df['Design Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Design Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Design', )
fig.add_trace(go.Scatter(x=[569.1], y=[89.9], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```

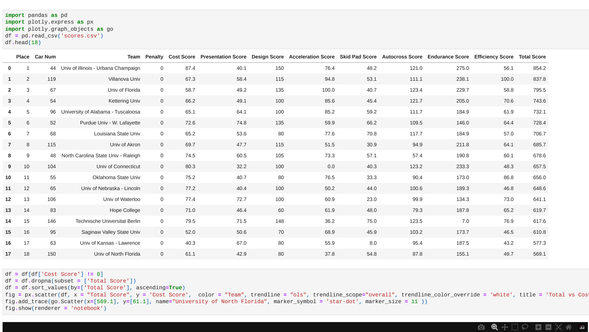
In [41]:
```
df = pd.read_csv('scores.csv')
df = df[df['Acceleration Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Acceleration Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Acceleration', )
fig.add_trace(go.Scatter(x=[569.1], y=[37.8], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```



In [42]:
```
df = pd.read_csv('scores.csv')
df = df[df['Skid Pad Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Skid Pad Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Skid Pad', )
fig.add_trace(go.Scatter(x=[569.1], y=[54.8], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```



In [43]:
```
df = pd.read_csv('scores.csv')
df = df[df['Autocross Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Autocross Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Autocross', )
fig.add_trace(go.Scatter(x=[569.1], y=[87.0], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```



In [45]:
```
df = pd.read_csv('scores.csv')
df = df[df['Endurance Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Endurance Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Endurance', )
fig.add_trace(go.Scatter(x=[569.1], y=[155.1], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```


In [46]:
```
df = pd.read_csv('scores finished endurance.csv')
df = df[df['Endurance Score'] != 0]
df = df.dropna(subset = ['Total Score'])
df = df.sort_values(by=['Total Score'], ascending=True)
fig = px.scatter(df, x = 'Total Score', y = 'Endurance Score',  color = 'Team', trendline = "ols", trendline_scope="overall", trendline_color_override = 'white', title = 'Total vs Endurance', )
fig.add_trace(go.Scatter(x=[569.1], y=[155.1], name="University of North Florida", marker_symbol = 'star-dot', marker_size = 11 ))
fig.show(renderer = 'notebook')
```