

```
1 # ==== rollerCoaster.ipynb ===
2 #%%
3 $mat[lotlib notebook
4 #get_ipython().run_line_magic('matplotlib', 'notebook')
5
6
7 #%%
8 # Import Dependencies
9 import matplotlib.pyplot as plt
10 import numpy as np
11
12 #%%
13 # Create the X and Y axis lists
14 # Both coasters are 120 seconds long and
15 # the speed was measured every 10 seconds.
16 time = np.arange(0,130,10)
17 speed_chain = [9, 8, 90, 85, 80, 70, 70, 65, 55, 60, 70, 65, 50]
18 speed_launch = [75, 70, 60, 65, 60, 45, 55, 50, 40, 40, 35, 35, 30]
19
20
21 #%%
22 # Plot the charts and apply some styling
23 danger_drop, = plt.plot(time, speed_chain, color="red", label="Danger Drop")
24 railgun, = plt.plot(time, speed_launch, color="blue", label="RailGun")
25
26
27 #%%
28 # Add labels to X and Y axes :: Add title
29 plt.title("Coaster Speed Over Time")
30 plt.xlabel("Coaster Runtime")
31 plt.ylabel("Speed (MPH)")
32
33
34 #%%
35 # Set the limits for the X and Y axes
36 plt.xlim(0,120)
37 plt.ylim(5,95)
38
39
40 #%%
41 # Create a legend for the chart
42 plt.legend(handles=[danger_drop, railgun], loc="best")
43
44
45 #%%
46 # Add in a grid for the chart
47 plt.grid()
48
49
50 #%%
51 plt.show()
52
53
54 #%%
```