**Exercise 3**

You have been provided with two .csv files (Lap1 and Lap2) with racing data from two laps of a racing circuit. Based on the aforementioned data, produce four figures:

i) Figure 1, Subplot 1: Speed Trace for Lap1, Speed (Miles Per Hour) vs. Distance (Miles)

Figure 1, Subplot 2: Engine Speed Trace for Lap1, Engine Speed (RPM) vs.

Distance (Miles)

ii) Figure 2, Subplot 1: Speed Trace for Lap 2, Speed (Miles Per Hour) vs. Distance (Miles)

Figure 2, Subplot 2: Engine Speed Trace for Lap2, Engine Speed (RPM) vs. Distance (Miles)

iii) Figure 3, Speed Traces for Laps 1 and 2 on the same plot,

Speed (Miles Per Hour) vs. Distance (Miles)

iv) Figure 4, Engine Speed Traces for Laps 1 and 2 on the same plot,

Engine Speed (RPM) vs. Distance (Miles)

Each graph should contain, Title, x-axis labeling and y-axis labeling; the units of measurement should also be included.

v) Based on the figures above, estimate the number of straight parts and corners of the racing circuit; justify your answer.

vi) Describe, with your own words, what is Variance and what is Cumulative Variance in a Motorsport context as well as their importance.