

Francisco Trejo

2/4/2023

CS 4375.004

Karen Mazidi

## Portfolio Component 1: Data Exploration

```
1 // Francisco Trejo FDT200000
2 // CS4375.004 with Karen Mazidi
3 // Portfolio Component 1: Data Exploration
4 #include <iostream>
5 #include <fstream>
6 #include <vector>
7 #include <string>
8 #include <algorithm>
9 #include <numeric>
10
11 using namespace std;
12
13 void printStats(const vector<double> &data) {
14     double sum = 0;
15     double mean = 0;
16     double range = 0;
17     double median = 0;
18
19     for (int i = 0; i < data.size(); i++) {
20         sum += data[i];
21     }
22     mean = sum / data.size();
23
24     range = data.back() - data.front();
25
26     sort(data.begin(), data.end());
27     median = data[data.size() / 2];
28 }
```

Microsoft Visual Studio Debug Console

```
Opening file Boston.csv.
Reading line 1
heading: rm,medv
new length 506
Closing file Boston.csv.
Number of records: 506

Stats for rm
The sum is: 3180.03
The mean is: 6.28463
The range is: 3.561 - 8.78
The median is: 6.2085

Stats for medv
The sum is: 11401.6
The mean is: 22.5328
The range is: 5 - 50
The median is: 21.2

Covariance = 4.49345
Correlation = 0.69536

Program terminated.
C:\Users\Paco Trejo\source\repos\ConsoleApplication3\x64\Debug\ConsoleApplication3.exe (process 16448) exited with code 0.
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

'ConsoleApplication3.exe' (Win32): Loaded 'C:\Windows\System32\kernel.appcore.dll'.
'ConsoleApplication3.exe' (Win32): Loaded 'C:\Windows\System32\msvcrt.dll'.
The thread 0x2bec has exited with code 0 (0x0).
The thread 0x46d8 has exited with code 0 (0x0).
```



machine learning because since both find relationships between two attributes then it can help find trends and reliability of those trends to predict future data.

[https://ftrejo2013.github.io/Class\\_Portfolio/](https://ftrejo2013.github.io/Class_Portfolio/)