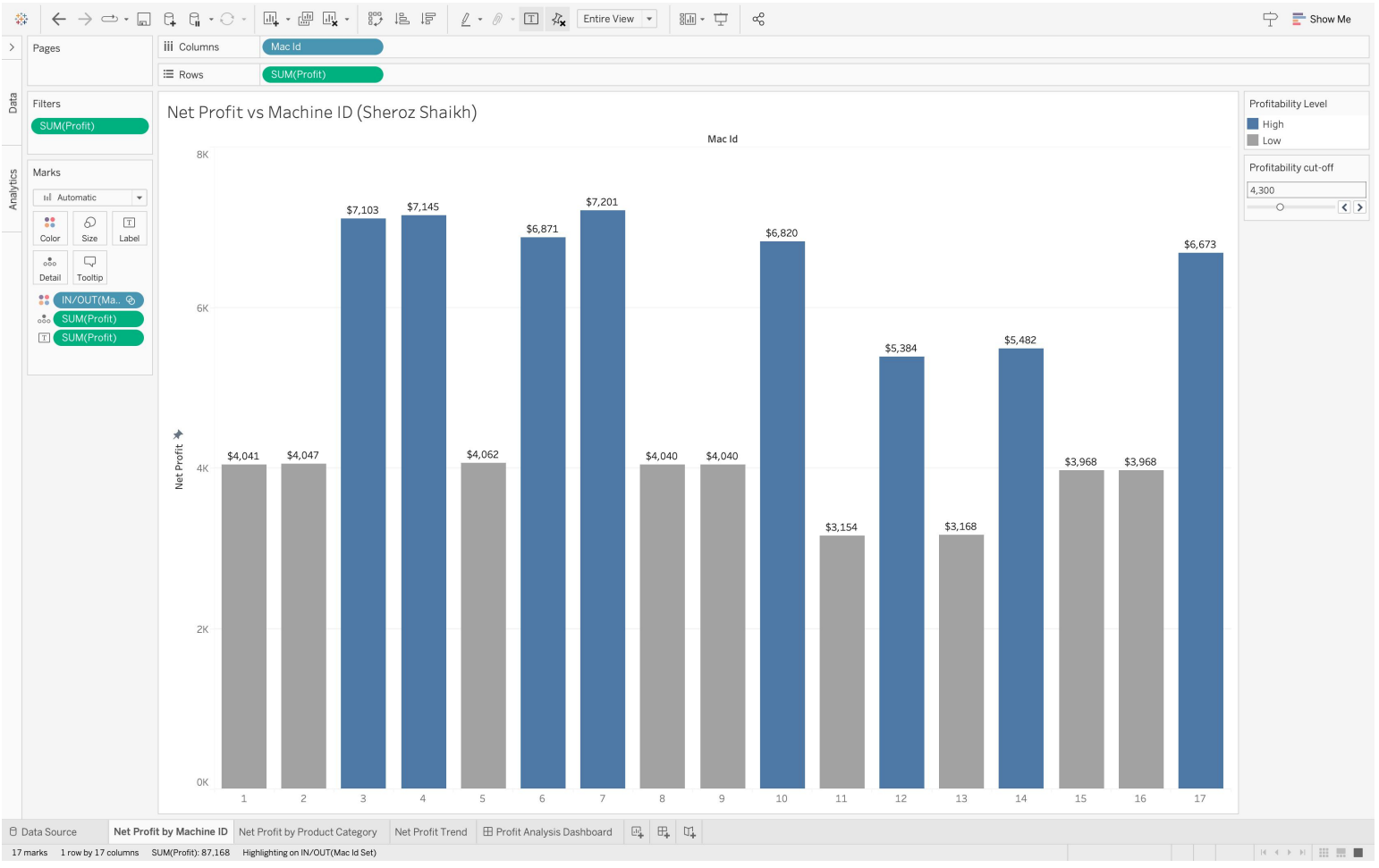
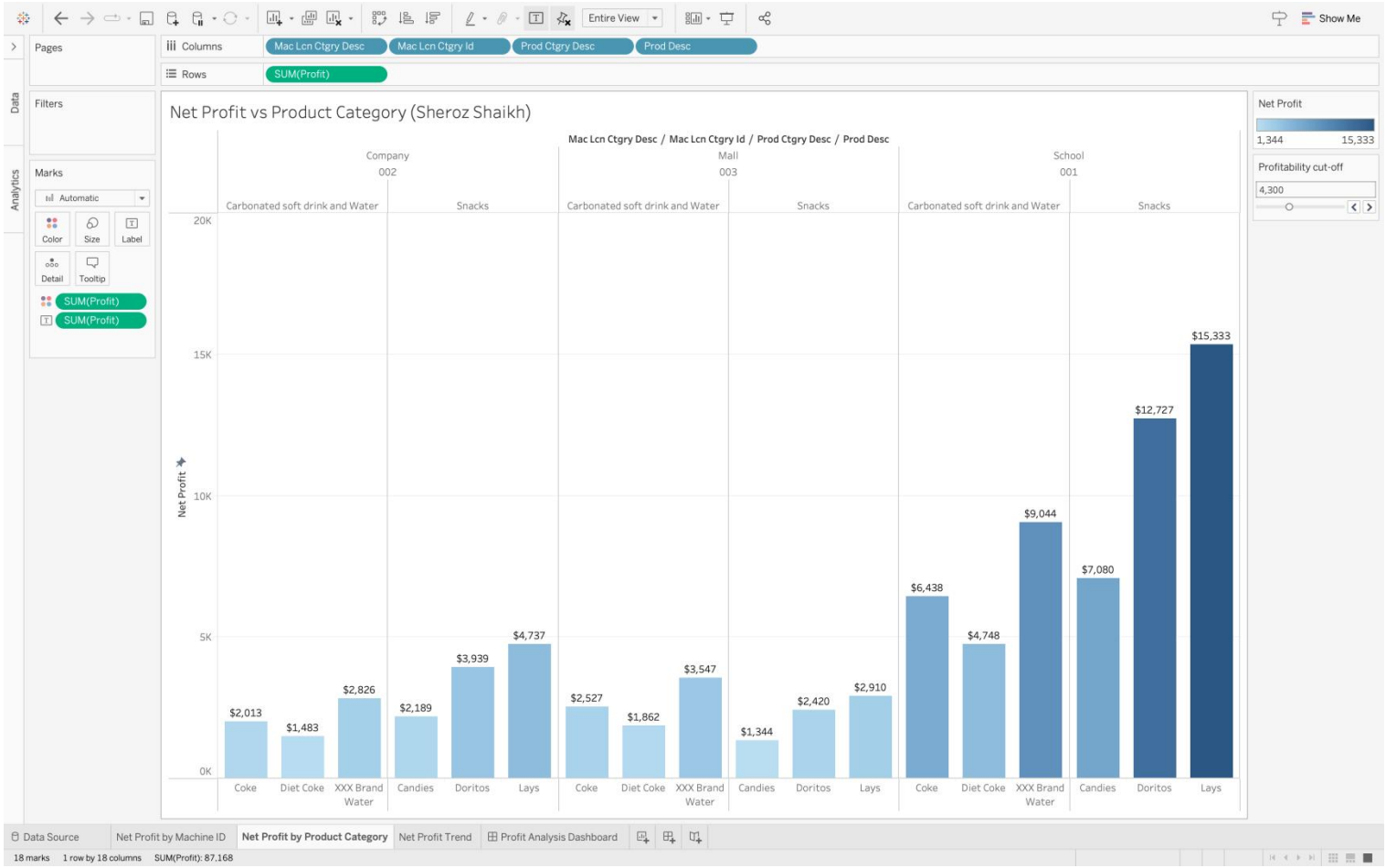
Homework Assignment 5
Performance Dashboards (2)

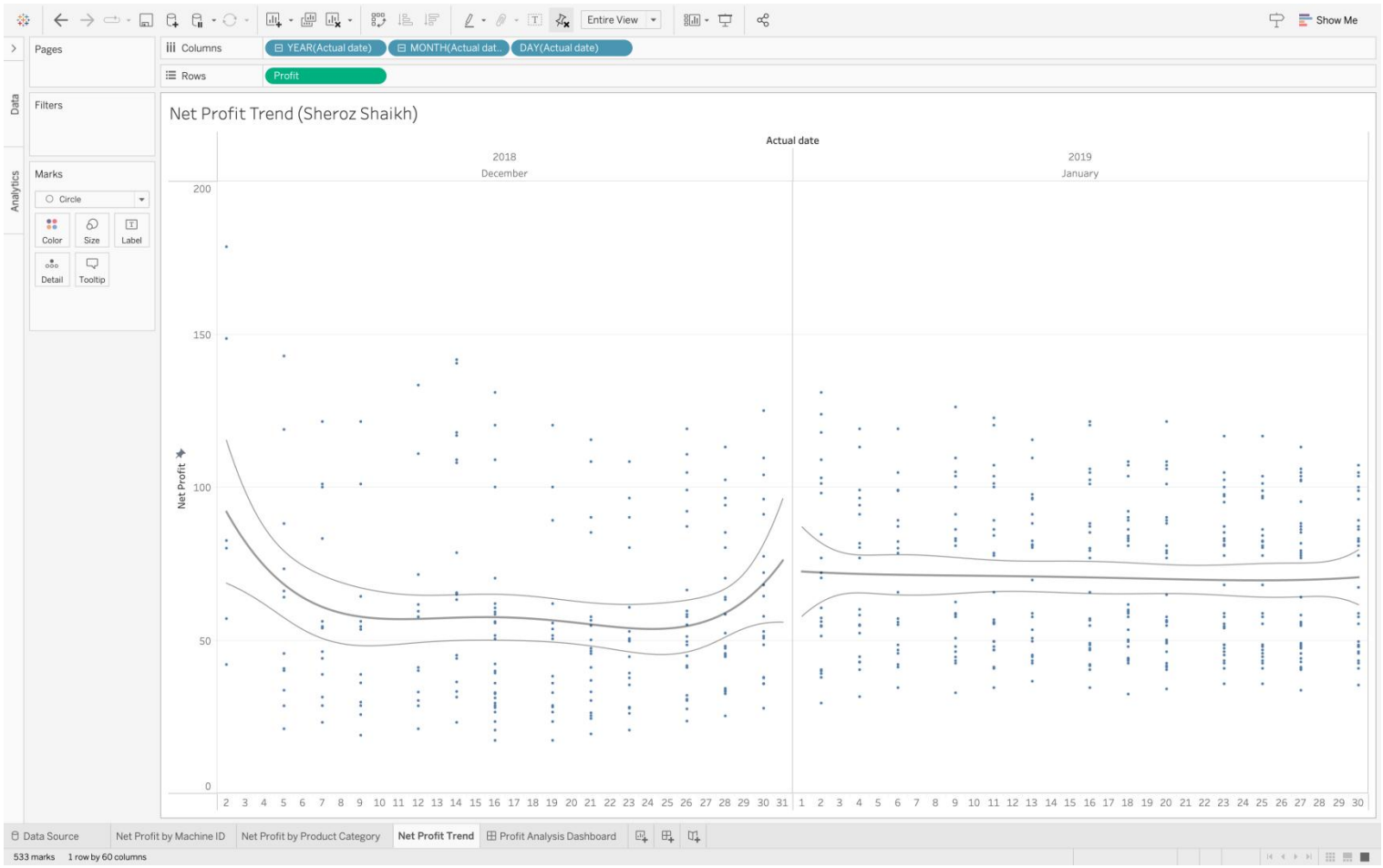
1) Net Profit vs. Machine ID: This chart is used to visualize and compare the profitability of the 17 vending machines. The main point about this chart is that each machine will be considered either highly profitable or not highly profitable depending on whether the net profit of that machine is (or is not) greater than the profitability cut-off point. Profitability cut-off is a value that can be dynamically set by the user. In other words, Profitability cut-off is a parameter that the user sets to distinguish between highly profitable and lowly profitable vending machines. To add this feature to the chart, you should work with sets and parameters. To learn about these concepts, first, please read the tutorials provided by Tableau on how to create sets and parameters. Next, watch the video that I have prepared for you to gain a better understanding of how to use these features in Tableau. The video, titled "Exercise (2): Using Parameters and Sets in Tableau (video)", has been uploaded to Canvas. Profitability cut-off is a float number with the display format of currency. It can be any value between $2,500 and $7,500, both inclusive (step size: 100). The user will use a slider to change the value of that cut-off point. For example, if the user sets the cut-off at $4,300, all machines with a net profit at or greater than $4,300 will be considered profitable (indicated by dark blue bars), while the remaining machines will be classified as unprofitable and displayed in a different color, such as gray or light pink. Please use appropriate mark types, axis labels, etc. to create a chart similar to the one provided to you in the figure above. The colors that you use, however, do not have to be the same as the ones that I have used.



2) Net Profit vs. Product Category: This chart presents the net profit for each product under each category for each location. When creating the chart (on the worksheet), be sure to build hierarchies such as product category description product description. To learn about (or review) the concepts of hierarchies, drill down, and roll up, please read this tutorial. Moreover, use appropriate mark types as well as an interactive filter so that the user can select the locations (i.e., company, mall, school) that they want to see on the chart. Also, sort the products based on their net profit (see the screenshot above). Do not forget to customize the title of the chart to show what the chart presents and who has created it.



3) Trend Analysis: The third chart shows how the total profit has changed over time. The scatterplot includes a trend line (in my case, it is a polynomial function of degree 4, but you can change it to improve the performance or goodness of fit of the line). It also includes confidence bands. Again, use an appropriate title for the chart. To learn how to use trend lines, please read this Tableau tutorial.



4. Final Dashboard