**Video Script: Section 2 Video 3 – Using bar charts**

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| No. | Description | Action on screen | Narration |
| 1 | Introduction  (Outcome and why it is desirable)  This should give the viewer an idea of the outcome of the task at the beginning of the videos and set the stage and expectations of the viewer. | Opening slides. | **In this video**, we are going to see how to use bar charts for comparing quantities. |
| 2 | Context(Problem/Solution)  Present the viewer with a real-world solution and how the situation would pose as a challenge. It always helps to draw the viewer's attention using a use-case. Metadata template can be used here. |  | Bar charts are used for comparing single values across subsets of data. For example, the number of items in a few subsets, the mean value for a number of populations etc. |
| 3 | Guidance (How to do it and how it works): |  | Open activity\_02\_03.R in RStudio. |
| 4 |  |  | Load ggplot2. We’ll be using the diamonds dataset to plot how many diamonds we have for each value of cut and clarity. |
| 5 |  | Select and run:  ggplot(diamonds) + geom\_bar( aes(x = cut)) + ggtitle("#diamonds per cut")  A description... | Run the first example. |
| 6 |  |  | We can see that we have about 5'000 diamonds of good cut, 12'000 diamonds of very good cut etc.  We didn’t specify the height of the each bar, because by default they are calculated as the number of item in the subset defined by the aesthetics ‘x’.  You can map the height of each bar to a value of your choice with the aesthetics ‘y’. |
| 7 |  |  | You also have access to other aesthetics. ‘fill’ for example. It controls the color inside the box.  For example, if you map it to ‘clarity’, the bars for each value of cut are broken down into a set of smaller bars, one per value of clarity, as in the second example. |
| 8 |  | Select and run:  # Example 02  # Counting the number of diamonds for each type of cut and broken down by clarity  ggplot(diamonds) + geom\_bar( aes(x = cut, fill = clarity)) + ggtitle("#diamonds per cut, broken down by clarity")  A description... |  |
| 9 |  |  | However,bar heights are now difficult to compare because they don’t start from the same heights. |
| 10 |  |  | Use the parameter ‘position’ and set it to ‘dodge’, to put each bar on the same baseline: |
| 11 |  | Select and run:  ggplot(diamonds) + geom\_bar( aes(x = cut, fill = clarity), position = "dodge") + ggtitle("#diamonds per cut, broken down by clarity\n(bars side by side)")  A description... | Run example 03. |
| 12 |  |  | Each bar now represents the diamonds for particular values of cut and clarity. They are easy to compare because they all start from the bottom line. |
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| 16 | Conclusion:The video concludes by showing the viewer that the goal has been achieved, and reminding them why they should be happy about that. A PowerPoint summary slide with the key points emphasized would make it easier for the viewer to remember what was covered in the video | Last slide of the PPT | In this video, we’ve seen how to quickly produce bar charts and control their relative positions for comparing them more easily.  In the next video, we’ll see how to draw histograms and density plots. |