

How to graph Recognise™ data on excel

1. Open the excel spreadsheet with data points

Note that the data sets are organised from most recent first. We want to invert this.

2. Select all data points. Click *home* tab select *Editing* then *Sort & Filter* then *Custom Sort*
3. Ensure *My data has headers* is ticked, then sort by 'date of test' sort on 'values' order 'A to Z'

We will now change the accuracy data points to be expressed as a percentage of 10 rather than 100 (i.e. 8 = 80%) – this is so pain can also be graphed (will become obvious later)

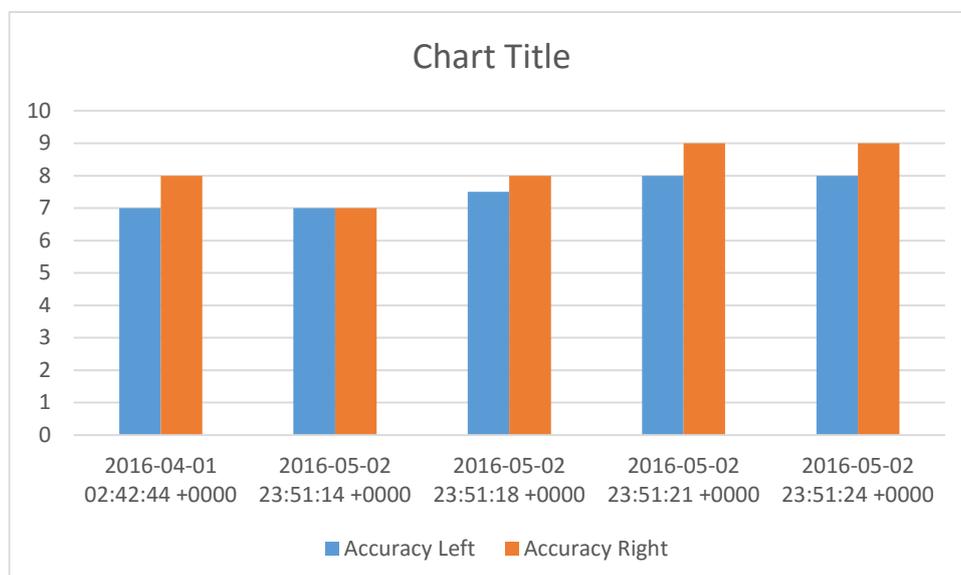
4. At the end of Row 1, create a new heading 'Accuracy Left' and 'Accuracy Right'
5. Underneath 'accuracy left' in row 2 select the cell and type **=F2/10**
6. Click the bottom right corner of this cell and drag down to copy to all cells for each date
7. Repeat under 'accuracy right' - in row 2 select the cell and type **=G2/10**
8. Click the bottom right corner of this cell and drag down to copy to all cells for each date.

Now to change the response times so that they are presented in seconds.

9. At the end of Row 1, create a new heading 'Speed left' and 'Speed right'
10. Underneath 'Speed left' in row 2 select the cell and type **=H2*10**
11. Click the bottom right corner of this cell and drag down to copy to all cells for each date
12. Repeat under 'Speed right' - in row 2 select the cell and type **=I2*10**
13. Click the bottom right corner of this cell and drag down to copy to all cells for each date.

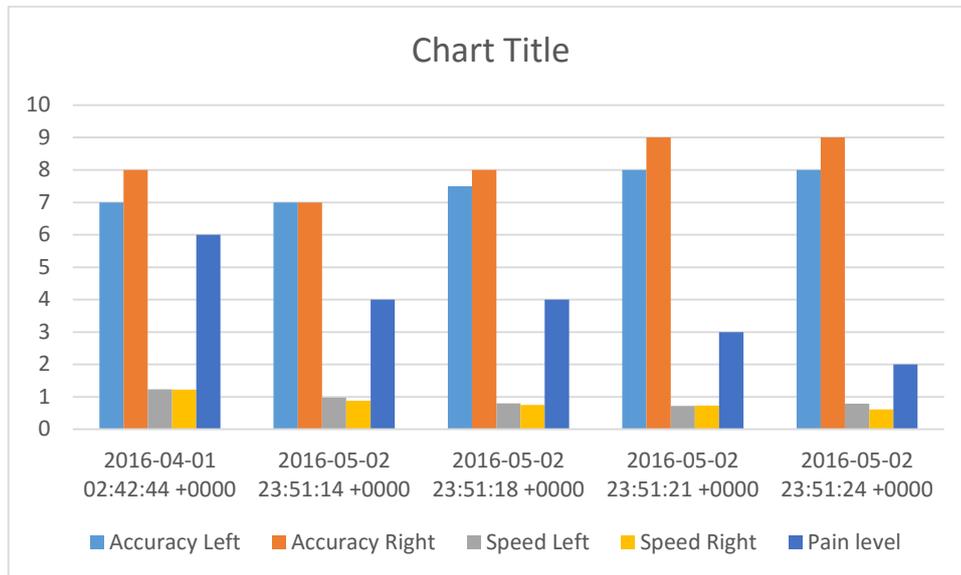
Now create the graph (with accuracy)

14. Select all the data points in Column A, hold down control (Windows) to synonymously select all the data points under the newly created column 'accuracy left' and 'accuracy right'
15. Click *Insert* then under *Charts* click *Combo chart* > *Create custom combo chart*
16. Make sure the *Chart Type* are both *clustered column* and that *Secondary axis* is not selected
17. Click OK, graph should look like this ...



Now to add response time and pain level to graph

18. Right click the graph and click *Select data*
19. Click *Add*. Under *series name*: select 'speed left'. Under *series values*: select data points under 'speed left'
20. Repeat the same for 'speed right' and 'pain'. Click OK. Graph may now look like this (don't worry, it's not finished yet)



21. Right click graph and select *Change chart type*
22. On the left column select *Combo*
23. Under *Chart type* ensure 'speed left' 'speed right' and 'pain' are *Line*
24. Select *Secondary axis* for 'speed left' and 'speed right'
25. You can now change heading titles, colours, add axis titles. Graph should look like below.

