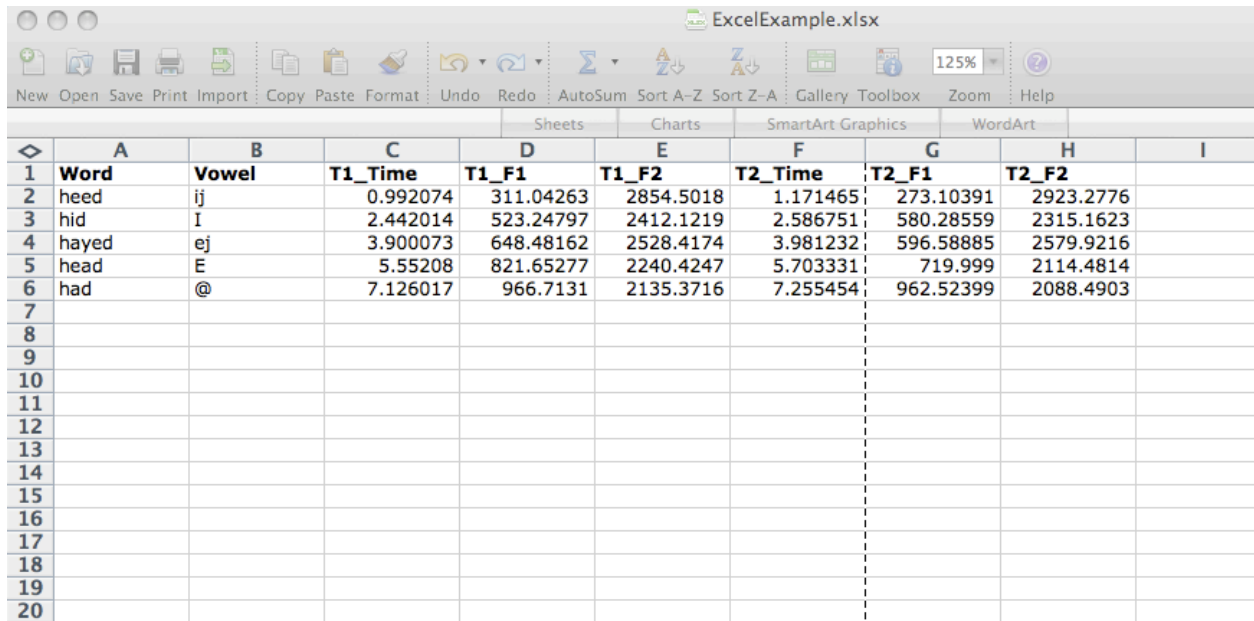


Creating a Vowel Chart in Excel

Excel can be a useful tool for displaying vowel data. The following is a basic guide for how to manage your vowel data and plot it in Excel.

1) Handling Data

- After you have used Praat to measure vowel formants, either by hand or automatically with a script, you will have a set of formant values that you will need to organize.
- First, you need to provide labels for the columns where the data will go.
 - o Rows – Vowel #1, Vowel #2, etc.
 - o Columns – Word, Vowel, F1_T1, F1_T2, ..., F2_T1, F2_T2, ..., etc.
- Enter the information and measurements for each vowel row.



The screenshot shows an Excel spreadsheet titled 'ExcelExample.xlsx'. The spreadsheet contains the following data:

	A	B	C	D	E	F	G	H	I
1	Word	Vowel	T1_Time	T1_F1	T1_F2	T2_Time	T2_F1	T2_F2	
2	heed	ij	0.992074	311.04263	2854.5018	1.171465	273.10391	2923.2776	
3	hid	I	2.442014	523.24797	2412.1219	2.586751	580.28559	2315.1623	
4	hayed	ej	3.900073	648.48162	2528.4174	3.981232	596.58885	2579.9216	
5	head	E	5.55208	821.65277	2240.4247	5.703331	719.999	2114.4814	
6	had	@	7.126017	966.7131	2135.3716	7.255454	962.52399	2088.4903	
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2) Plotting the Vowel Measurements

- Insert a basic scatterplot. (This step varies from each version of Excel – generally speaking, an 'X Y (Scatter)' plot is one of the options available when you insert a chart.
- After you've inserted a new chart, right-click the empty box (your blank scatterplot) and select <Select Data>.

- Here is how you'll want to set up your data points in the 'Select Data' box:
 - Under the 'Series' box, click on <Add> to add a data series.
 - Edit Series:
 - Series name: 'Temp Point 1' (or whatever you want to call your first temporal point data)
 - Series x values: These are your T1-Formant 2 values <select all vowels of that column>
 - Series y values: These are your T1-Formant 1 values <select all vowels of that column>
 - Press <Add> in the Select Data Source box
 - Edit Series:
 - Series name: 'Temp Point 2' (or whatever you want to call your first temporal point data)
 - Series x values: These are your T2-Formant 2 values <select all vowels of that column>
 - Series y values: These are your T2-Formant 1 values <select all vowels of that column>
 - Press <OK>
 - Reversing y- and x- axes:
 - Right click what axis you'd like and select <Format Axis>
 - Check the box that says "Values in reverse order".
 - Do this for both the y- and x-axis.
 - You can also adjust your ranges for either axis.
 - Formatting the chart:
 - You can label your vowels by:
 - Selecting a particular series/token and right clicking → to select <Add Data Labels>. Measurement values will appear, but you can edit these by double-clicking on them to insert text. You can also move around the text boxes. (Tip: If only one token gets highlighted (not the entire series), it will be the only one that will change.)

- You can also adjust the sizes, colors, and shapes of your tokens by:
 - Selecting a particular series/token and right clicking → to select <Format Data Series>. (Tip: Again, if only one token gets highlighted (not the entire series), it will be the only one that will change.)

Example:

