

SPSS and Importing Data

► Let's import some data from a table on a web page to Excel, then in SPSS. The following steps will get us weather data for Forest Grove for Feb 2015. If you get a "Continue running scripts?" Error press **Yes**. If you get an "Install Software?" error press **No**.

<http://www.wunderground.com/history/>

Location: 97116

Date: Feb 1, 2015

Click Submit

Go to Custom Tab

Make the date range: Feb 1, 2015 to Feb 28, 2015

Click Go

Click the Yellow and Black checkmark at the **very top** of the web page. This will import the entire web page into Excel and then we can delete everything but the Observations Table. Press **Import** to bring the data into the current worksheet.

Delete everything until you get to Weather History & Observations. Delete everything after that table. Format the table by adding borders, resizing columns, merging columns, bolding the headings, etc.

| Weather History & Observations | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|------------|-----|-----|----------------|-----|-----|--------------|-----|-----|-----------------------|-------|-------|-----------------|-----|-----|------------|-----|------|--------------|-----------|--|
| 2013 | Temp. (°F) | | | Dew Point (°F) | | | Humidity (%) | | | Sea Level Press. (in) | | | Visibility (mi) | | | Wind (mph) | | | Precip. (in) | Events | |
| Oct | high | avg | low | high | avg | low | high | avg | low | high | avg | low | high | avg | low | high | avg | high | sum | | |
| 1 | 59 | 50 | 41 | 48 | 45 | 41 | 96 | 75 | 53 | 30.2 | 30.08 | 29.98 | 10 | 9 | 2 | 14 | 6 | 17 | 0.33 | Rain | |
| 2 | 53 | 47 | 41 | 47 | 44 | 40 | 100 | 86 | 71 | 30.2 | 30.14 | 30.08 | 10 | 6 | 0 | 13 | 2 | 16 | 0.32 | Fog, Rain | |
| 3 | 59 | 49 | 39 | 46 | 42 | 39 | 100 | 81 | 62 | 30.44 | 30.36 | 30.2 | 10 | 4 | 0 | 9 | 1 | 11 | 0 | Fog | |
| 4 | 63 | 50 | 36 | 49 | 41 | 36 | 100 | 78 | 56 | 30.47 | 30.43 | 30.35 | 10 | 4 | 0 | 8 | 2 | 10 | 0 | Fog | |
| 5 | 72 | 54 | 36 | 51 | 42 | 37 | 100 | 66 | 31 | 30.35 | 30.26 | 30.14 | 10 | 7 | 0 | 5 | 1 | 7 | 0 | Fog | |
| 6 | 73 | 56 | 38 | 50 | 42 | 37 | 100 | 69 | 38 | 30.14 | 30.07 | 29.96 | 10 | 5 | 0 | 14 | 5 | 19 | 0.01 | Fog | |
| 7 | 62 | 55 | 48 | 52 | 47 | 42 | 93 | 72 | 51 | 30.14 | 30.05 | 29.98 | 10 | 9 | 4 | 16 | 6 | 22 | 0.05 | Rain | |
| 8 | 57 | 49 | 40 | 50 | 46 | 41 | 100 | 83 | 66 | 30.15 | 30.07 | 29.99 | 10 | 8 | 2 | 20 | 5 | 24 | 0.07 | Rain | |
| 9 | 62 | 49 | 35 | 47 | 39 | 35 | 100 | 70 | 39 | 30.12 | 30.06 | 29.97 | 10 | 6 | 0 | 9 | 2 | 10 | 0 | Fog | |

Let's only look at Temp., Dew Point, and Humidity. Delete all the data to the right of low Humidity in Excel.

Since SPSS needs the data in a particular format, we need to edit the spreadsheet. The first row needs to contain the variable names that SPSS will use during the import. Remember, spaces are not your friend.

1. Let's edit row 3 to give meaningful column names then delete rows 1 and 2. I'm using Day, T_high, T_avg, and T_low, DP_high, DP_avg, DP_low, H_high, H_avg, and H_low. Delete any extra data below the table as well.

2. Let's add a **DayOfWeek** column before the **T_high** column. Insert a column, add a heading **DayOfWeek**, and type **Sunday** in the second row (Feb 1, 2015 was a Sunday). Click and drag **Sunday** to fill in the remaining rows. Excel should fill out the days of the week correctly

3. Save this as an Excel file (**Wunderground_Feb2015**) and close the workbook.

4. Open the new Excel file in SPSS. Check the definition of each variable and make any changes you deem necessary.

5. Save as Wunderground_Feb_2015.sav

► Build a chart to show the mean high temperature per day of the week, from Feb 1 to Feb 28

What type of chart should you use? Why?

What is on the X-Axis? Why?

What is on the Y-Axis? Why?

Does this show the days in the correct order? Why or why not?

6. Add values to DayOfWeek (1=Sunday, 2=Monday....)

7. Transform | Recode into Same Variables... | Select DayOfWeek into String Variables | Old and New Values | Map: Sunday=1, etc for DayOfWeek. Click Continue then OK.



8. Go to Data View and click on

9. Save the file.

► Rebuild the chart to show the mean high temperature per day of the week, from Feb 1 to Feb 28.

Does this show the days in the correct order? Why or why not?

► Build a chart to show the high temperature over time, from Feb 1 to Feb 28.

What type of chart should you use? Why?

What is on the X-Axis? Why?

What is on the Y-Axis? Why?

► How well does the average humidity predict the low dew point?