

## 2.13 Exercise: Comparing groups (*iNZight Lite version*)

This exercise will enable you to construct the types of graphs and summaries used in the previous video. The skills addressed are:

1. Get dot plots and summary tables when both a numeric variable and a categorical variable (containing the group labels) are used.
2. Colour by a third variable.

### INSTRUCTIONS

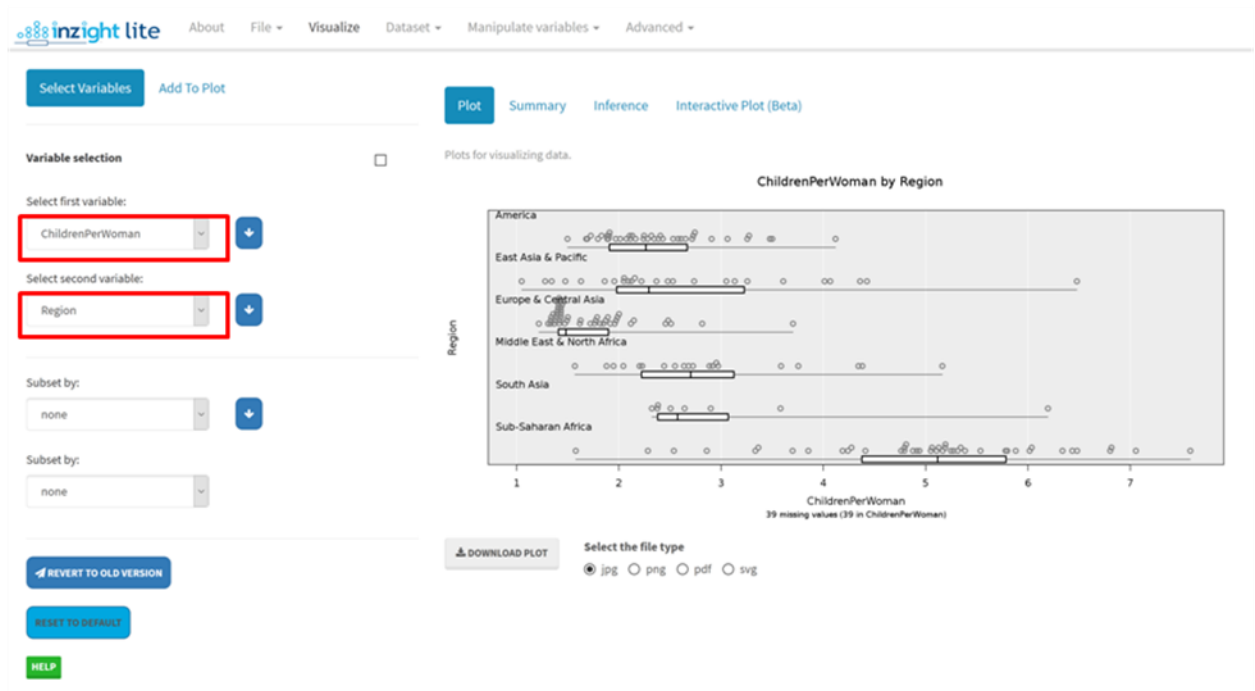
Follow these instructions to generate the plots. If you have a problem doing the exercise, see the common questions on page 5.

Import the **Gapminder-2008** dataset into iNZight Lite:

- Select **File > Dataset Examples**
- Select Data set category: **Future-Learn**
- Select **Gapminder-2008**
- Click on **Select Set**
- Click **Visualize**

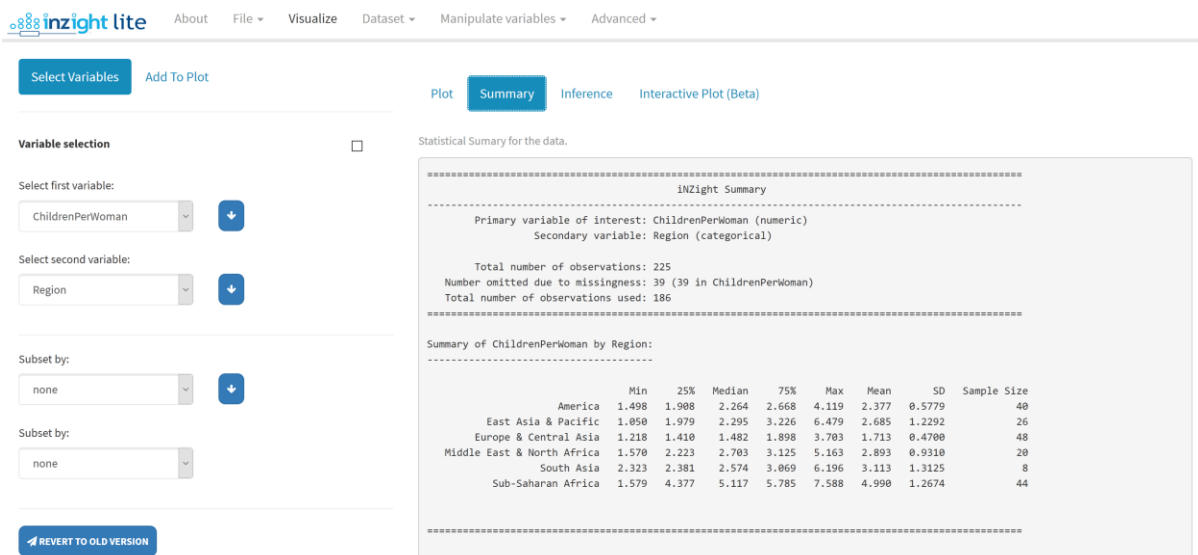
### Make dot plots from one numeric and one categorical variable

Select the variable name **ChildrenPerWoman** from the **First variable** slot and **Region** from the **Second variable** slot. iNZight automatically produces a set of dot plots for comparing groups whenever the name of a **numeric** variable is dragged into the **First variable** slot and the name of a **categorical** variable is dragged into the **Second variable** slot.



## Generate the Summary window

Click on the **Summary** tab to view the associated summary table.



### PRACTICE (~5 min)

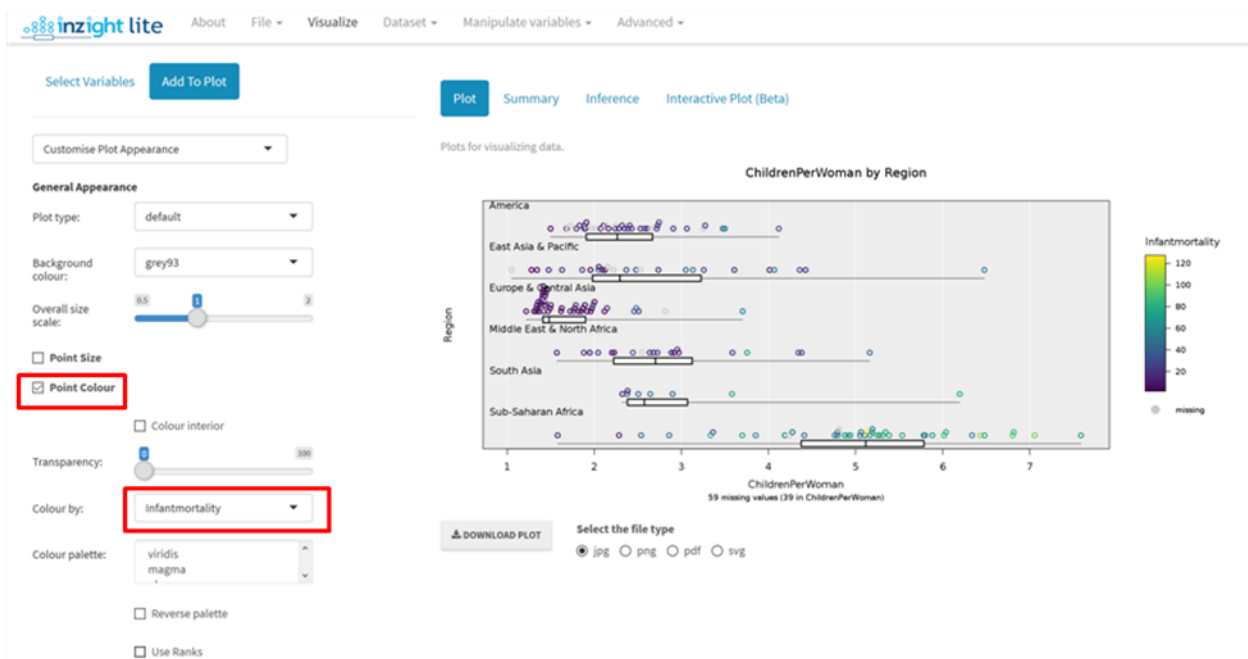
From the **Gapminder-2008** dataset, choose other variables (one numeric variable and one categorical) that are of interest to you. When you select a different variable into the variable slot it automatically overwrites the previous variable.

## Colour by a third variable

Recreate the first graph of **ChildrenPerWoman** and **Region**.

then

- Using the **Add to Plot** tab click on **Point Colour** to reveal options
- Colour by **InfantMortality**.

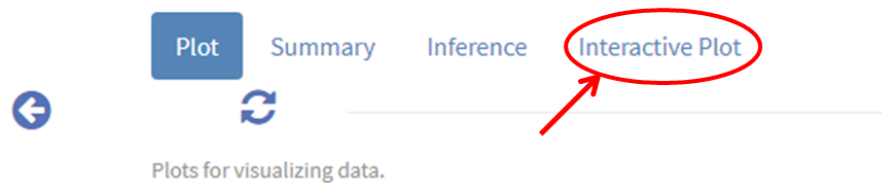


### PRACTICE (~5 min)

Try some other choices for the numeric variable in the **First variable** slot and the colour-by variable.

## Optional

*Try this new feature (interactive graphics)*



Click on the **Interactive Plot** tab. This will give you an interactive version of your graph that lets you query it in various ways like hovering over points or clicking them. You have to Click **Produce Plot** for it to appear. This is a protection as the conversion process can be slow if there are many points to be drawn.

You can download these plots as Interactive HTML files which you can give to others. They do not need to be connected to iNZight Lite to work.

### *Other ways of representing data like this*

There are several ways of plotting the data like this. Go to **Add to Plot** and look at what is delivered by the various options under **Plot type**. Can you see relationships between the ways the various types of graph represent the information? Play with some of the controls for each plot type.

## Common questions

*Some columns of dots look like they are suspended in mid-air.*

iNZight stacks points that are close together but not identical. This problem occurs when the points are discretely spaced but too big to drop down onto the axis. Either stretch the plot window horizontally until there is room for them to drop down or make the points smaller using option: **Change Plot Appearance** and moving the **Adjust size** slider.