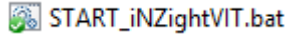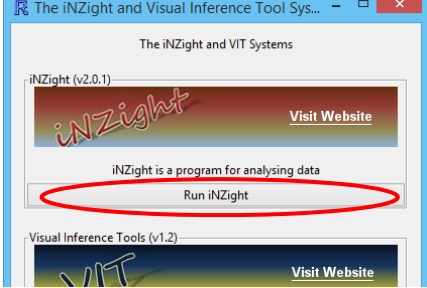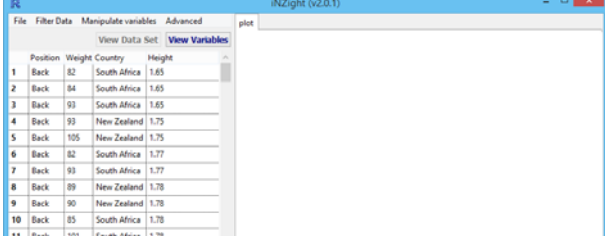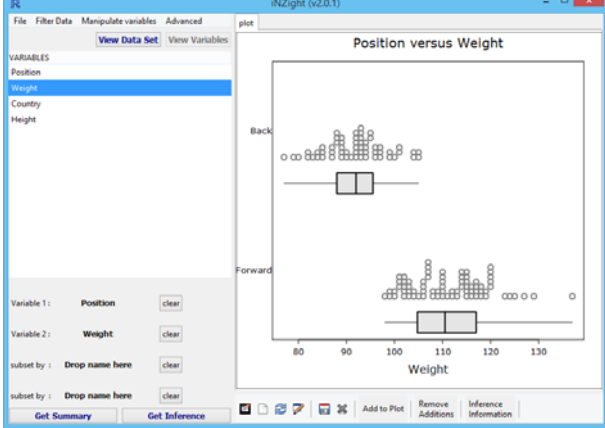## Data – Using iNZight

The next section that we need to do is the data section. This is reproducing the graphs on Page 2 using iNZight, as well as a few other things. The example below will go through using the Rugby dataset for weight by position.

First up we need to start iNZight by clicking on the shortcut in the iNZight folder that looks like this.	🟢 START_iNZightVIT.bat
After it has had some time to think it will open up a window that looks like this. To start off with we need to open the iNZight window by clicking on the 'Run iNZight' button (circled)	The iNZight and Visual Inference Tool Sys... The iNZight and VIT Systems iNZight (v2.0.1) Visit Website iNZight is a program for analysing data Run iNZight Visual Inference Tools (v1.2) Visit Website
This will bring up the main iNZight window that looks like this. We then want to import the data, by clicking on 'File' and 'Import Data'. Browse for the right file and follow the prompts, and once imported it should look like this.	
We then drag the names of the variables down to the Variables section below. In this case, 'Variable 1' is weight and 'Variable 2' is position. This will give a window that now looks like this. You can save this graph as an image by clicking the save button below the graph and following form. This can then be inserted wherever you need it. *Note 1: to make the variables easier to see you can click the view variables button on the top right of the variables.* *Note 2: You can now easily identify outliers… if you click on 'identify points' then 'locate' if you click on the point it will display the information next to that point on the graph… by default it displays the id which you can use to look up the data point in the list, but you can also get it to show any of the other variables... see example on the graph in the next row where point 18 is identified. You can still click on the point even if the mouse cursor is still 'spinning'.*	
We also need to get the summary of the dataset. This can be done by clicking on 'Get Summary'. This will open a new window.	Summary of Weight by Position: Min. 1st Qu. Median Mean 3rd Qu. Max. Std.dev Sample.Size n.missing Back 77 88 92 91.75 95.5 105 6.41 59 0 Forward 98 104.8 110.5 111.3 117 137 7.99 76 0

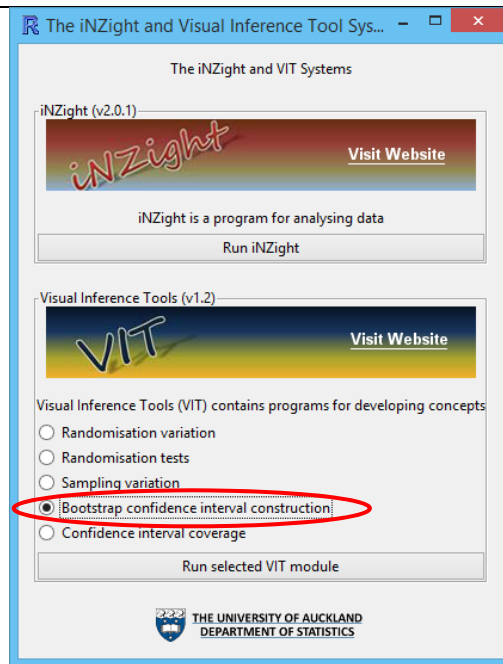Now it is your turn. For each dataset you need to produce:

- The box and whisker plot.
- The summary statistics.

The box and whiskers are at the front of the booklet, and the sample statistics is included as an appendix so you can check your answers

Using iNZight / VIT to Create a Bootstrap Confidence Interval

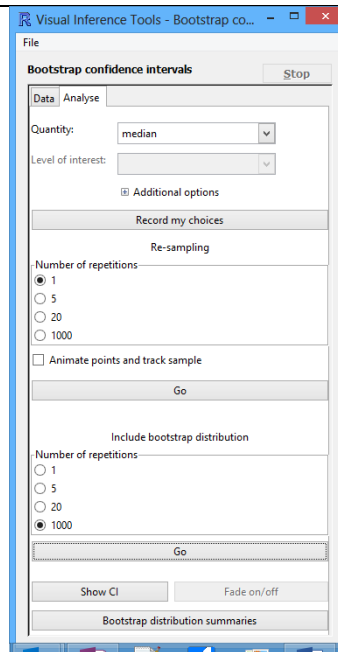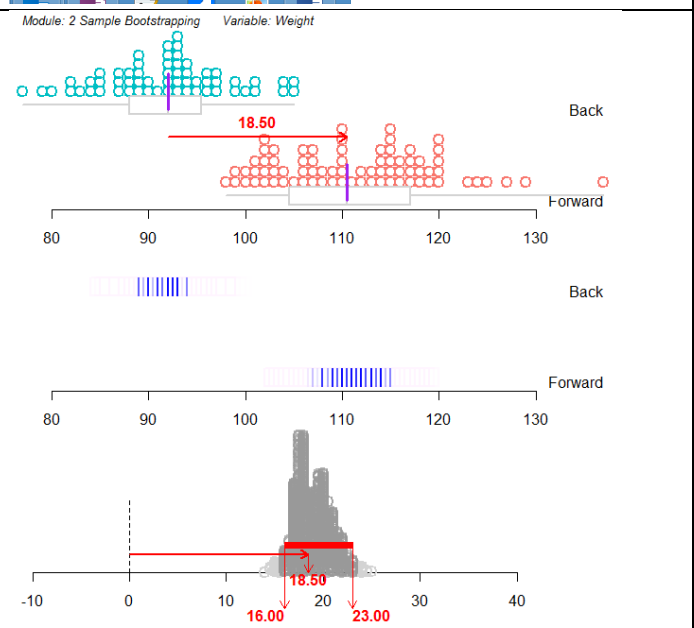|	
The next thing we need to do is to create a bootstrap distribution. To do this we need to load the bootstrap confidence interval module of VIT. Select as circled and click on the 'Run selected VIT module' button at the bottom of the window.	
You will need to import the data again, and once imported choose the variables. Variable one should be weight and variable 2 should be the position. This should give you a window that looks like the one on the right. The next step is to click on the 'Analyse' tab.	

You need to change the Quantity to 'median' and then click record my choices. Then click in the bottom section on 1000 repetitions and then click go, as shown to the right. Once done you need to click on 'Show CI' to get the confidence interval shown on the graph.	
This gives the output shown to the right, which tells us the difference between the medians is 18.50kg, but that we can be reasonably confident that forwards will be between 16kg and 23kgs on average heavier than the backs.	

Now it is your turn. For each dataset you need to produce the bootstrap confidence interval… don't forget to press the show CI button and write down the confidence intervals so you can refer back to them later.

1. ___16 kg___ to ___23 kg___
2. _____ to _____
3. _____ to _____
4. _____ to _____
5. _____ to _____
6. _____ to _____