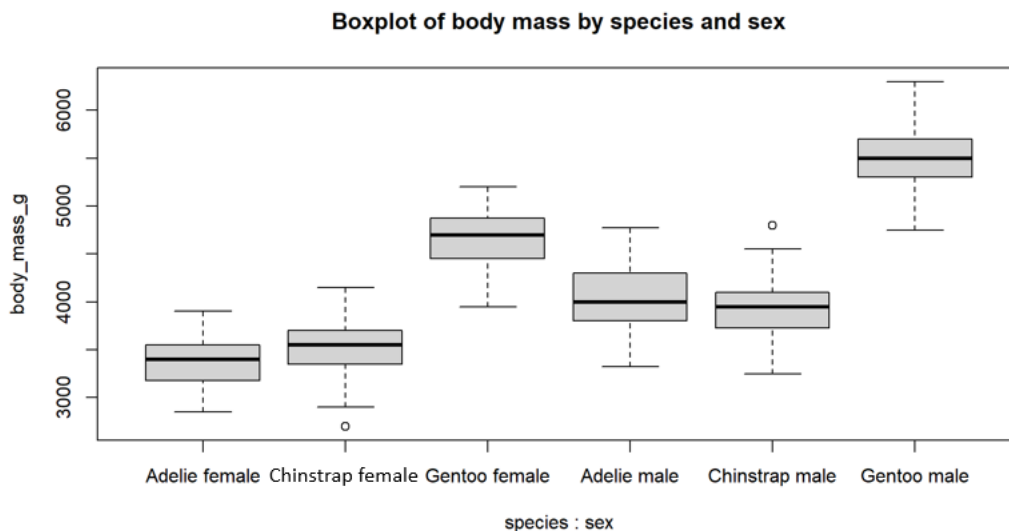


12/4/2022

Julian Burgoff

Analysis of Environmental Data

Using Models 2



- 1.
2. I think that male chinstrap and adelle penguins appear to be significantly larger than females because the mean body mass between the two groups looks quite different, with relatively minor overlap in the error bars of the boxplot. The chinstrap penguins don't appear to have significantly different body mass, the males are slightly bigger but there is considerably more overlap in the whiskers of the boxplots between the two sex groups.
3. It will improve the model fit for the body mass of adelle and gentoo penguins especially, which have more of a divergence in body mass between sexes.
4.

```
fit_both =  
lm(  
  formula = body_mass_g ~ sex*species,  
  data = penguins)
```
5. The base case is female Adelle penguins
6. "Intercept" + "specieschinstrap" = average mass of female chinstrap

7. 3527.21 g

8. 3527.206 g