Good to identify the null hypothesis and the alternative hypothesis. What does EDA mean? This is meant to be clear and easy for people to read through and follow what you've done so if you are using acronyms they need to be defined. Nice to present the data in knits tables. Much easier to read. Excellent, pull into new functions as well. In terms of data visualisation. I haven't come across glimpse before and that's good to know. Good to identify the response and predict variables.

Nice clear visualisation of the NAO trend through time, however, why not do this for the summer NAO given that's what we are interested in?

Nice to visualise it by month as well. Makes it much clearer that there is something going on in the summer.

Good To check for any is in the data. Why have you rename is the variable weight difference? It isn't a difference it's just a weight. Very nice visualisations of weight.

Good use of colours. Nice dive into the different potential effects on weight and very nice visualisations. Would've been good to do some interactions for example between age and year and weight.

Not totally sure that the not summer and summer NAO plots are particularly useful. A little hard to follow exactly what you did here and how you interpret them. Not clear why you would do a QQ plot of the main weights as this isn't the data you would be analysing. At least I hope it isn'all of these correlations against the means are quite difficult to interpret because that isn't really the underlying data as you've done an average which overly simplifies what's going on given that the data, age, sex and time structured. You seem to have fit your initial models too mean weights. This isn't correct as you'll be throwing out a bunch of data ticket on the variation between some of the other variables that you haven't accounted for when calculating the means. For example, the ID of the individual.

Good use of descdis and fittest. Really nice use of some more advance comparison tools for example comparison of modelling disease. However, these models are fundamentally wrong as they are fitted to the mean data. All of the rest of the plots are potentially meaningless given that you suspect that the day models don't fit well. However it's good to do a deep dive to check exactly what's going on.

You definitely don't need to plot the coefficients though as I don't think your model stupid fit, particularly well.

Your graphic output of performance package is very crushed and you do show there is heteroscedasticity and a few other things in there as well right?

You then move onto generalise linear mix affects modelling which is fine and actually probably the way you should've gone in the first place, however, you seem to effectively randomly choose what is going in as a random intercept rather than systematically considering what a priority should be in there. Site is certainly something that should be considered year might also be a possible addition. However, the one you've critically missed and this is because your calculation that means and fitting all of these models to the main data rather the actual raw data is ID the same is true of the nesting – why are you doing this? There's no rationale other than you can do it, very good to consider the temple autocorrelation. Model seems to fit the date of pretty well but again is wrong. At the end of this I'm still not clear whether you think the GLMM or GLM model is the better fit, or indeed what the conclusion are because of this. Overall, All learning outcomes have been attained well.

The student demonstrates the ability to be able to use R and Rstudio at a good level. There is evidence that the student understands the concepts covered, and the principals of coding using R. The student is able to employ critical analysis and judgement in determining what functions and packages to use, and writes appropriate code to achieve their goals. However, are some significant  lapses in interpretation and a lot of tangential material. Graphical representation of the outputs is very good. The code all works correctly, but could be easier to read and interpret. The student may have failed to correctly interpret the model outputs and may have drawn conclusions which are not wholly supported by the evidence they present. Presentation is generally good; with a good level of grammar and English, and good, clear formatting.