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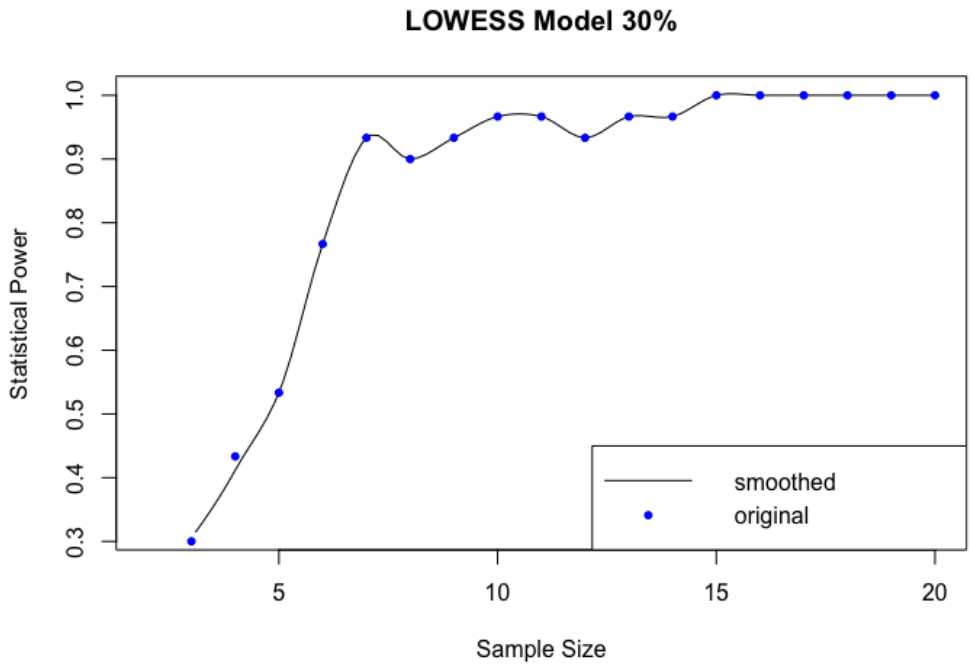
December 7, 2022

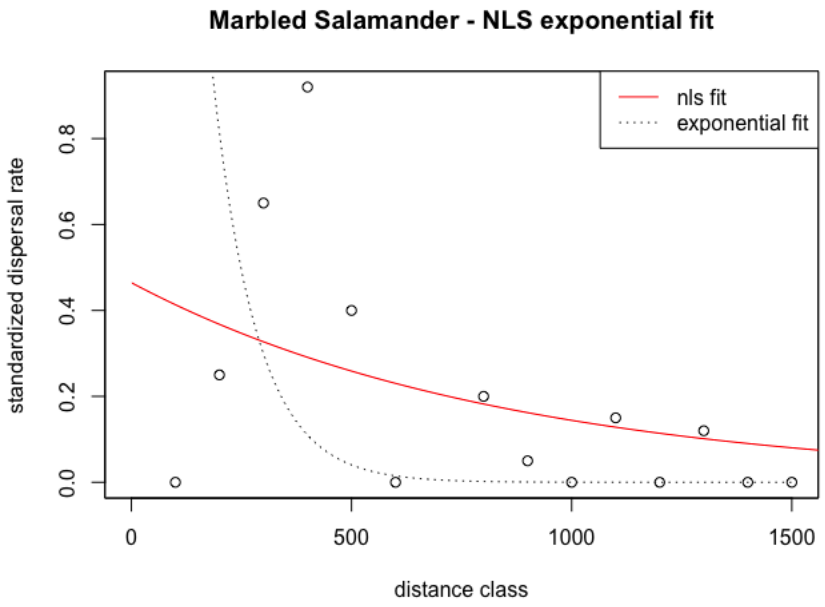
ECo 634: Michael France Nelson

Lab 12: Beyond the General Linear Model

Q1 (2 pts.): Include your plot in your lab report.



Q2 (2 pts.): Include your plot in your lab report.



Q3 (1 pt.): What are the AIC values for each of the 4 models?

	df	AIC
fit_gcki_ba_tot	2	1369.379
fit_gcki_slope	2	1432.615
fit_gcki_both_additive	3	1355.951
fit_gcki_both_interactive	4	1353.007

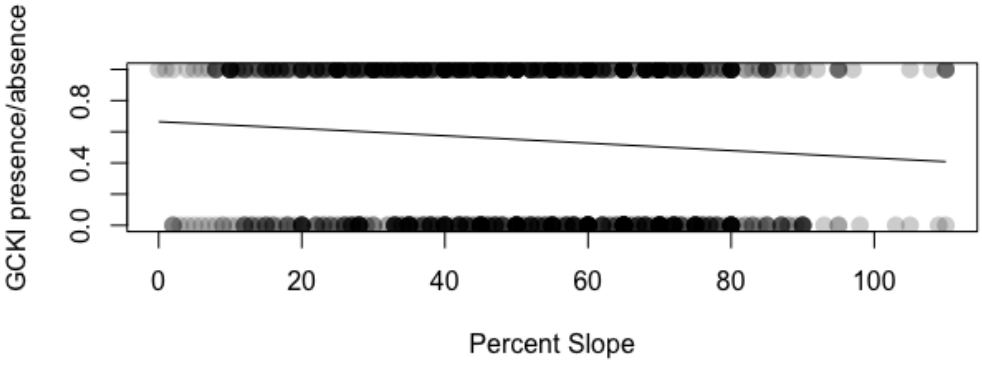
Q4 (1 pt.): Which model would you choose, and why?

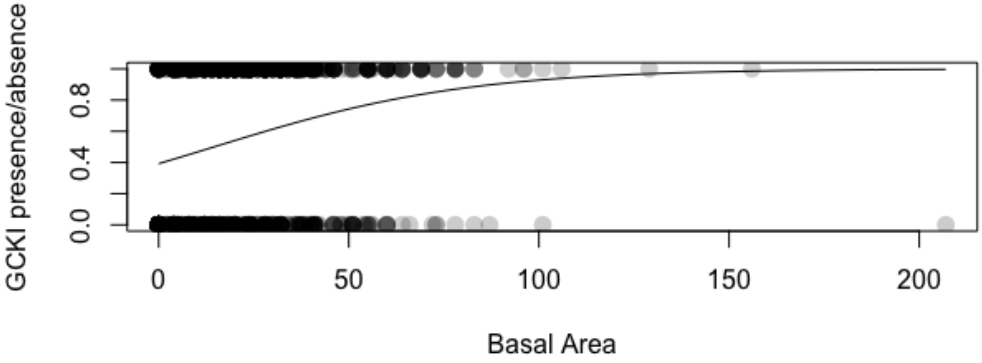
I would choose the interactive model because it has the lowest AIC value indicating that it is the best model fit for the data.

Q5 (1 pt.): Based on the model coefficient table of your chosen model, describe the direction and significance of the relationship(s) of the predictor variable or variables to the binary response. Make sure your answer is in terms of the ecological context.

The presence of the golden crowned kinglet has a negative relationship with slope and a positive relationship with total basal area. Therefore, as slope increases, the presence of GCKI decreases, but as total basal area increases, the presence of GCKI increases.

Q6 (2 pts.): Include your two single-predictor model plots in your report.





Q7 (4 pts.): Include contour plots (or interactive 3D perspective plots) in your report.