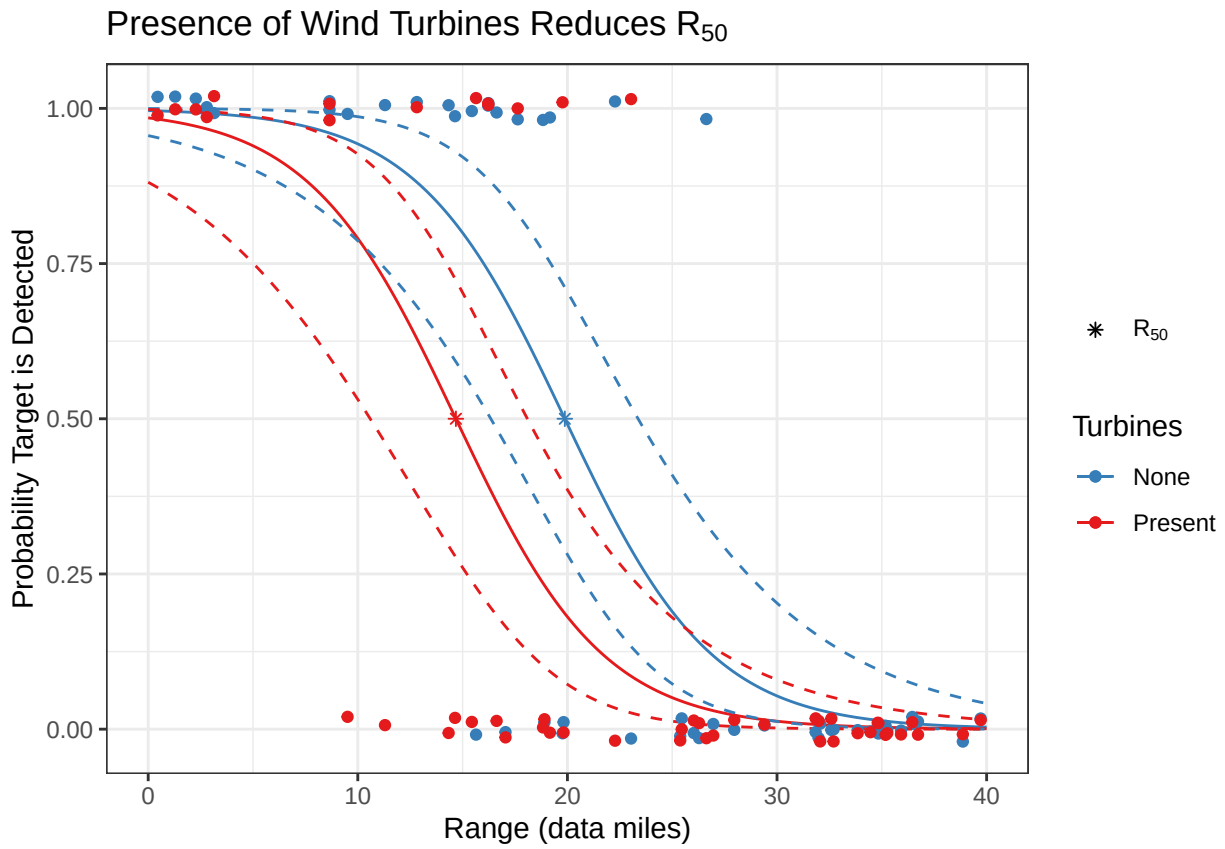
Mid-Semester Report

Develop a model for estimating R_{50}.

I was able to use a logistic model to estimate R_{50}. Below is a plot of the model and the confidence intervals.



R_{50} Estimaiton and Confidence Intervals

Turbines	R_{50}	Lower	Upper
None	19.88	16.35	23.37
Present	14.68	10.59	18.09

Identify impact of target conditions on R_{50}.

Since the `turbines` term is significant and it represents a horizontal shift in the two curves, the estimated R_{50} will be significantly different under the two conditions.

R_{50} Model Terms

term	estimate	std.error	statistic	p.value
(Intercept)	5.64	1.29	4.38	0.000012
range	-0.28	0.06	-4.70	0.000003
turbines	-1.47	0.69	-2.12	0.033855

Develop a means of estimating power and confidence.