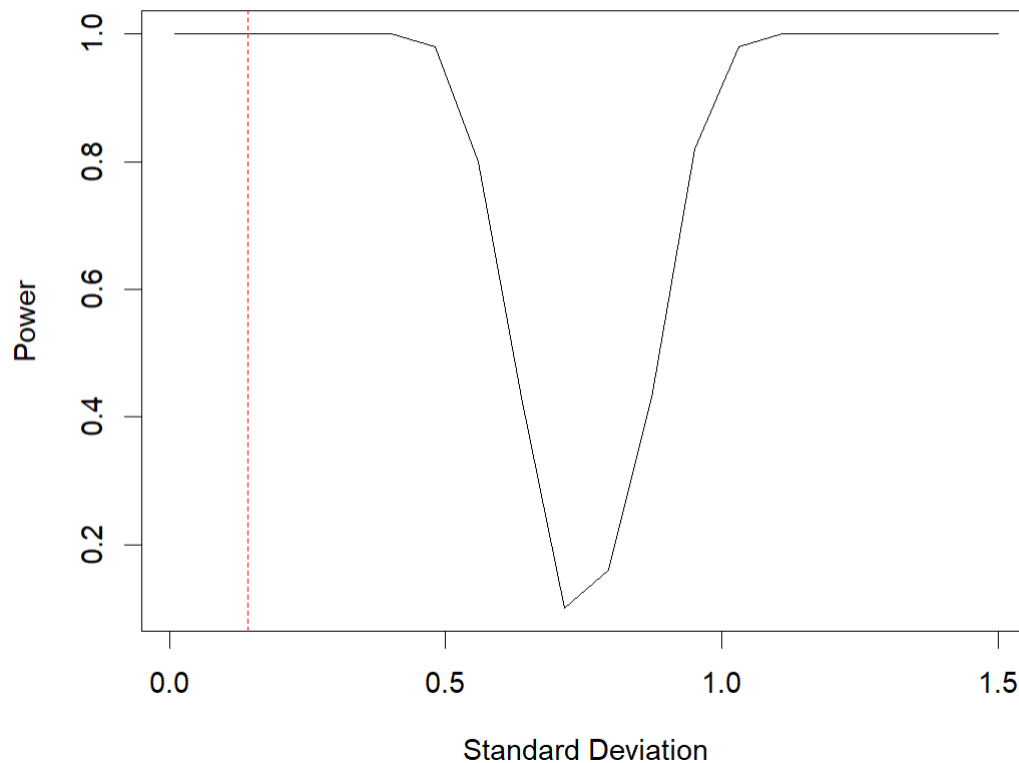


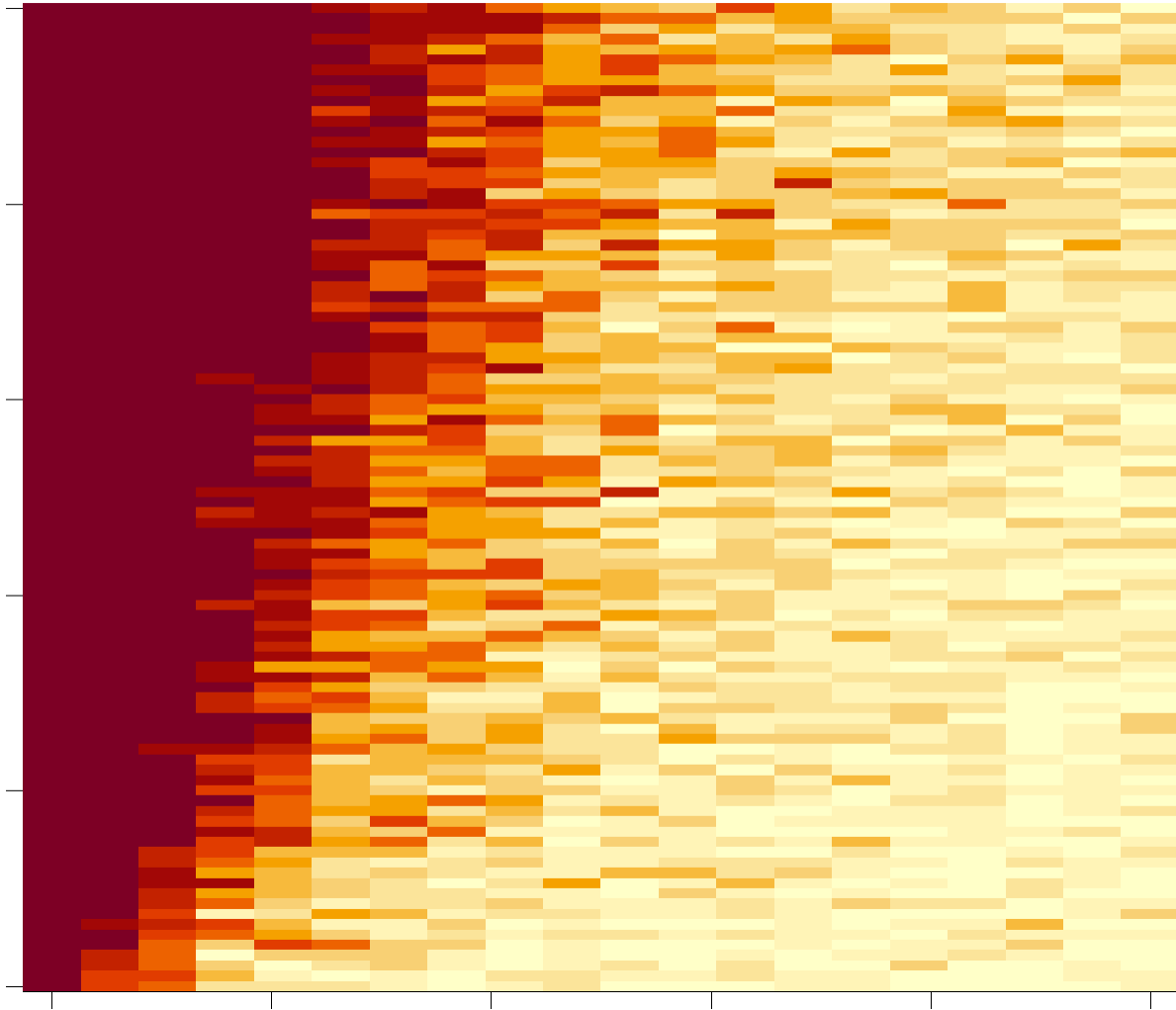
- **Q1 (2 pts.):** Include a figure of your line plot in your report.



- **Q2 (2 pts.):** Why do you think that statistical power decreases as population dispersion increases?

A larger standard deviation means more variation in the data, so it's harder to tell when something affects the data because it could just be error from the noise.

- **Q3 (2 pts.):** Include a figure of your contour plot in your report.



- **Q4 (2 pts.):** Qualitatively describe the patterns you see in the contour plot. Make sure you discuss the effects of sample size and population dispersion on statistical power.

Increases in both stdev and sample size decrease the statistical power of the model decreases. This makes sense, as the error will increase in both of these cases.

- **Q5 (5 pts.):** Upload your plot as an *interactive html* html file. NOTE: some Mac users are not able to use RGL. You may also upload a static plot created with `persp()` if you can't get RGL to work on your computer.

- **Q6 (2 pts.):** Describe how you could use the information shown in your plot when designing an experiment.

You could use the information shown in this plot as a way to examine the effect of increases in sample size and sd on the statistical power of the experiment, thus showing you the best sample size to use and the best sd to have, if possible.