

Paper search

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Finding a paper

Based on the availability of the data and the posting of the code on github (<https://github.com/bvilhjal/mixmogam> and https://github.com/mahort/root_microbiome.) I have selected a paper on the *Arabidopsis* root microbiome (Bergelson and Horton 2019) as the subject of my next replication attempt. If it goes well there are a lot of figures in this paper that would be worthwhile to replicate, but the one I am most interested in is the PCA shown in Figure 2 of the paper.

Once again, this paper uses the package `vegan` to do the PCA, so I've got that.

Status: Making progress, found PCA file in github and just trying to figure out where to start.

I am confused on how approach this, like I made a github repository for my replication, but they have a huge github repository for the original, and I'm wondering if I should download files individually or try to pull the whole project down in case there are files it's referencing that I miss? I downloaded whole github repository as a zip file and put it here, but I guess I need to alter relative paths or something to make it work? I tried running one of the PCA Rscript and get the error "Error in getData(cutoff = otuCutoff, combined = FALSE, marker = phylogeneticMarker, : unused arguments (cutoff = otuCutoff, combined = FALSE, marker = phylogeneticMarker, tissue = organ, minReadsPerSite = minimumReads, minSamplePerOTU = 1, whetherToGetTaxa = TRUE, rarefy = (minimumReads > 1), numberOfRarefactions = 1)", which idk what that means but I guess I need to tinker with this more.

```
library(vegan)
```

```
## Loading required package: permute
```

```
## Loading required package: lattice
```

```
## This is vegan 2.5-6
```

References

Bergelson, Joy, and Matthew Horton. 2019. "Characterizing Both Bacteria and Fungi Improves Understanding of the Arabidopsis Root Microbiome." Journal Article. *Scientific Reports (Nature Publisher Group)* 9 (1). <https://doi.org/10.1038/s41598-018-37208-z>.