Table: Software packages and versioning necessary for study reproducibility

R package	Version	General function	Link to document (vignette)
otuSummary	0.1.1	collapse OTU table at given taxonomic levels	https://github.com/cam315/otuSummary
funrar	1.4.1	convert an absolute abundance matrix into a relative abundance one	https://rdrr.io/cran/funrar/man/make_relative.html
dplyr	1.0.7	data frame manipulation	https://dplyr.tidyverse.org/
tidyr	1.1.4	data frame manipulation	https://tidyr.tidyverse.org/
compositions	2.0.2	CLR transformation	https://rdrr.io/cran/compositions/
stringr	1.4.0	string manipulation	https://stringr.tidyverse.org/
sva	3.20.0	batch effect correction	https://www.rdocumentation.org/packages/sva/versions/3.20.0/topics/ComBat
vegan	2.5.7	ecology statistical analysis	https://cran.r-project.org/web/packages/vegan/index.html
BiodiversityR	2.13.1	ordination analysis	https://github.com/cran/BiodiversityR
ggpubr	0.4.0	create publishable ggplot2 graph	https://rpkgs.datanovia.com/ggpubr/index.html
ggplot2	3.3.5	visualize good graph	https://ggplot2.tidyverse.org/
ggpattern	0.2.0	fill areas with textures for ggplot2 objects	https://coolbutuseless.github.io/package/ggpattern/
VennDiagram	1.6.20	Venn diagram plotting	https://cran.r-project.org/web/packages/VennDiagram/index.html
RColorBrewer	1.1.2	color palettes	https://cran.r-project.org/web/packages/RColorBrewer/index.html
ggforce	0.3.3	extension of ggplot2	https://ggforce.data-imaginist.com/
ggfortify	0.4.12	PCA plots	https://cran.r-project.org/web/packages/ggfortify/index.html
webr	0.1.5	pie and donut chart	https://rpubs.com/cardiomoon/398623
moonBook	0.2.4	pie and donut chart	https://rpubs.com/cardiomoon/398623
cowplot	1.1.1	plots arrangement	https://cran.r-project.org/web/packages/cowplot/index.html
caret	6.0.89	build machine learning models	https://topepo.github.io/caret/
lme4	1.1.27.1	generalized linear and mixed model (GLMM)	https://cran.r-project.org/web/packages/lme4/index.html
pROC	1.18.0	display and analyze ROC curves	https://cran.r-project.org/web/packages/pROC/index.html
R Markdown		collate all outputs into one file	
renv		ensure R environment reproducibility	
styler		keep code structure clear and tidy	
rstatix			

R version 4.1.1 (2021-08-10)
Platform: x86_64-w64-mingw32/x64 (64-bit)
Running under: Windows 10 x64 (build 14393)