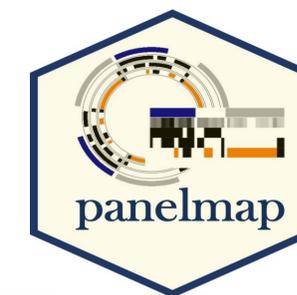


panelmap: A data visualization tool for summarizing categorical and continuous data types for known groups

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Introduction

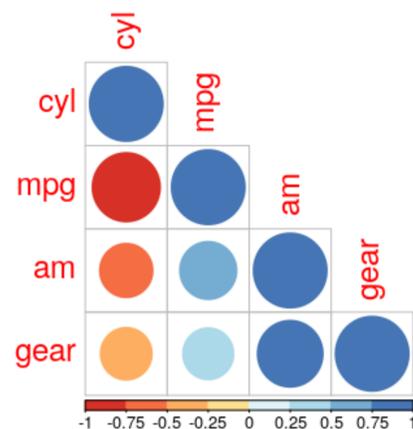
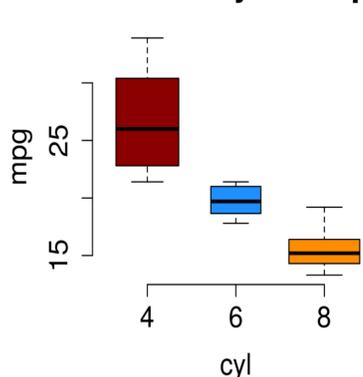
We often come across grouped data in our analyses. These groups can be either pre-defined or arrived analytically via k-means, hierarchical clustering, etc. For example, case : control, high-risk : low-risk, etc.

panelmap is a data visualization tool for viewing grouped data and its differential features in single and multi-panel layouts. It is a visual aid for understanding associations and trends in the dataset at a glance instead of tabular representation or trying to infer multiple plots.

Motivation

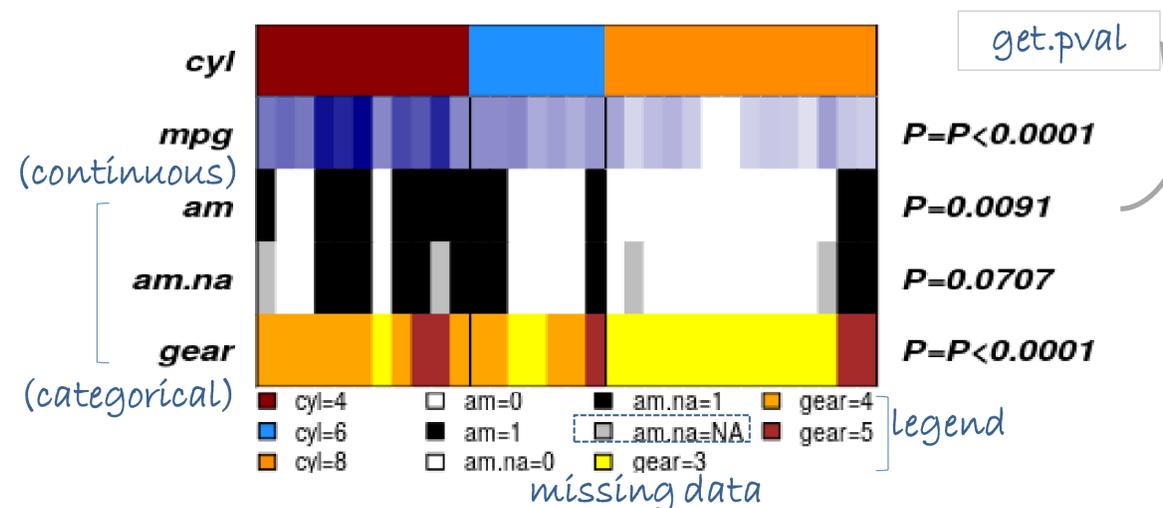
Relationships between various observations in the mtcars dataset can be summarized as follows-

mtcars: cyl vs mpg



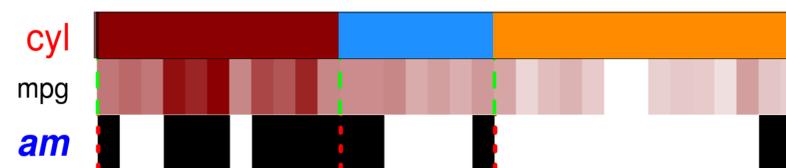
panelmap

Instead we can visualize via a *panelmap* plot, the relationship between with cyl and other variables in the mtcars dataset.



```
tab=makepanel(gr=cyl,gr.name="cyl,gr.col=1:3,mat=mat,mat.col=mat.col,mat.type=mat.type,border=TRUE,legend=TRUE ,get.pval= TRUE)
#returns panelmap plot and a summary statistic table
```

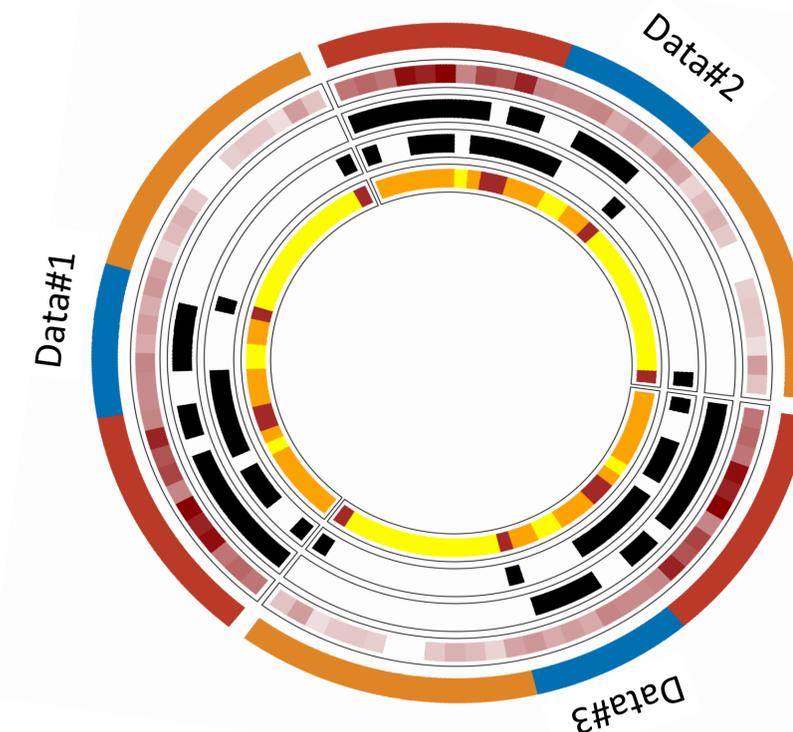
Visual tweaks and various customizations are available in *panelmap*.



panelmap provides a rich pool of functions to annotate, perform statistical tests, annotate missingness, automate legends, while allowing for various customizations to the user for generating rich and publication quality visualizations.

circomap

Multiple data types can be visualized by a multi *panelmap* layout, called *circomap*



References

1. Gu, Z. circlize implements and enhances circular visualization in R. Bioinformatics 2014.
2. Arora, Arshi, et al. "Pan-cancer identification of clinically relevant genomic subtypes using outcome-weighted integrative clustering." bioRxiv (2020).

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