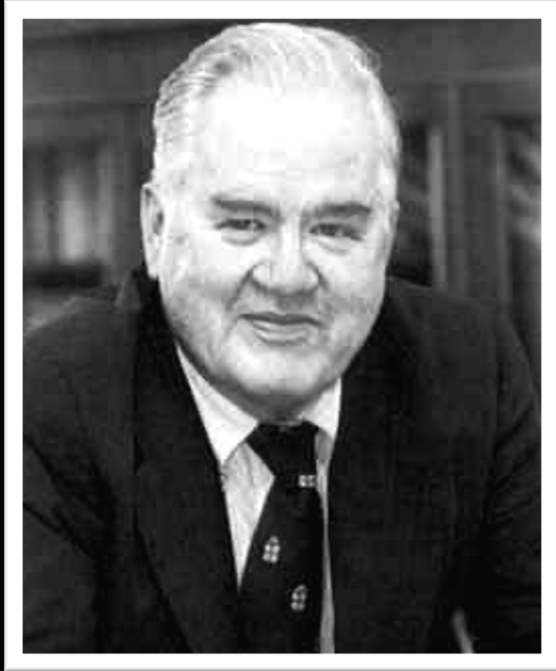


从零入门科研数据可视化云平台

openbioX & Hiplot Team

2020-12-26

Hiplot Team



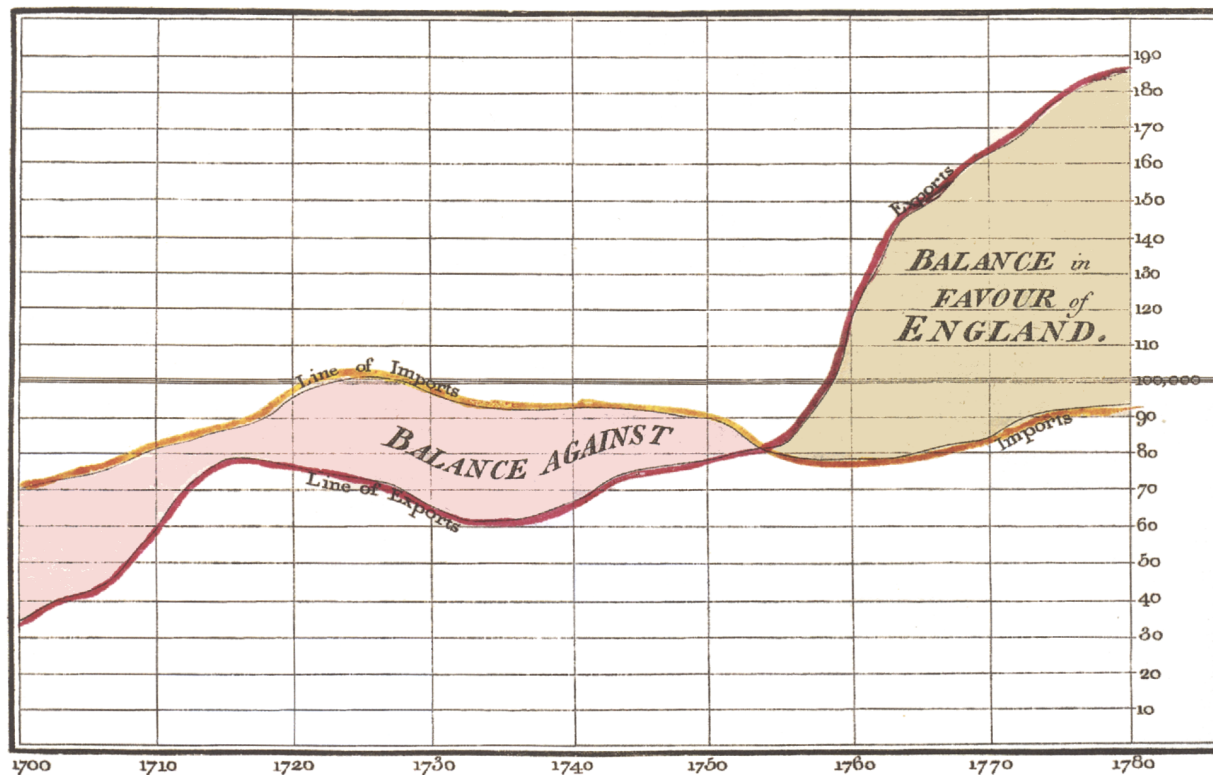
John Tukey
(1915-2000)

The greatest value of a picture is when it forces us to notice what we never expected to see.

图形的最大价值就是使我们注意到我们从来没有料到的信息

- **科研绘图实例**
- **Hiplot 可视化平台简介**
- **Hiplot 可视化平台操作演示**

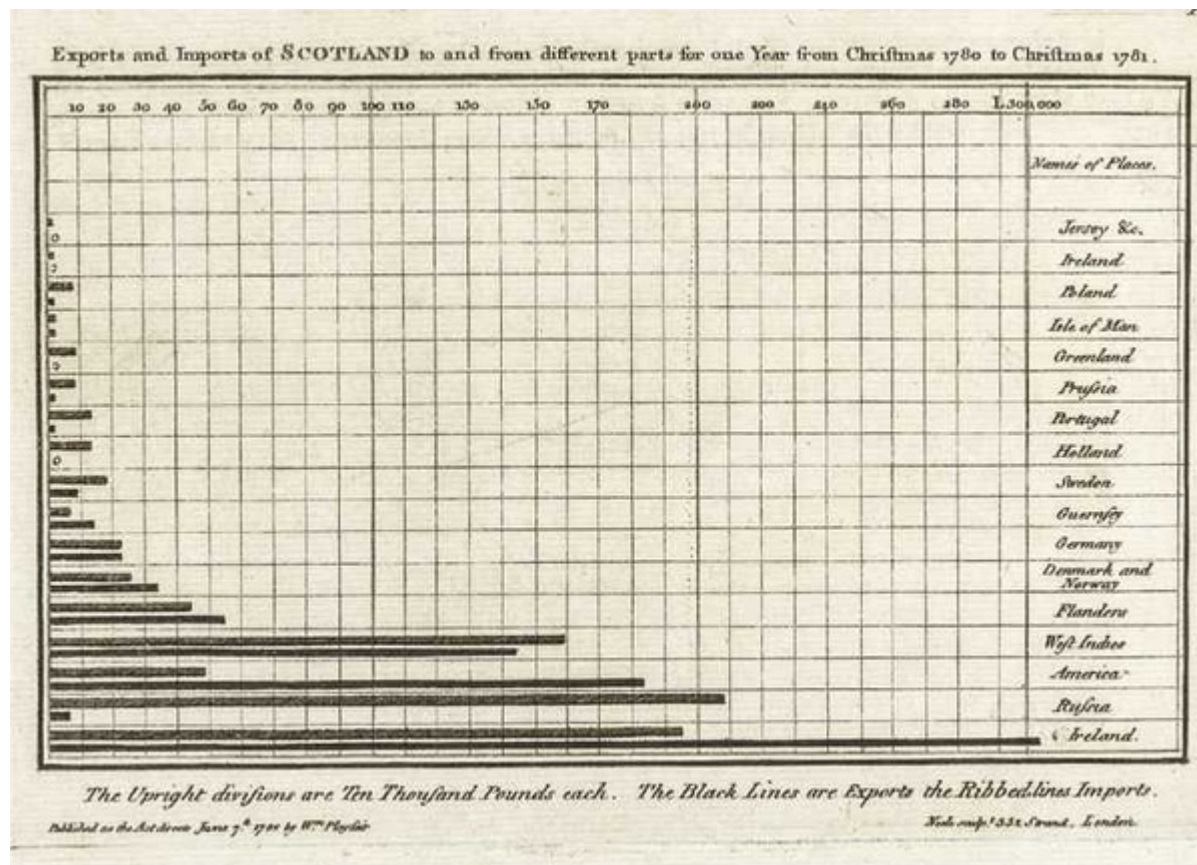
Exports and Imports to and from DENMARK & NORWAY from 1700 to 1780.



The Bottom line is divided into Years, the Right hand line into L10,000 each.
Published as the Act directs, 14th May 1786, by W^m Playfair Neale sculpt 352, Strand, London.

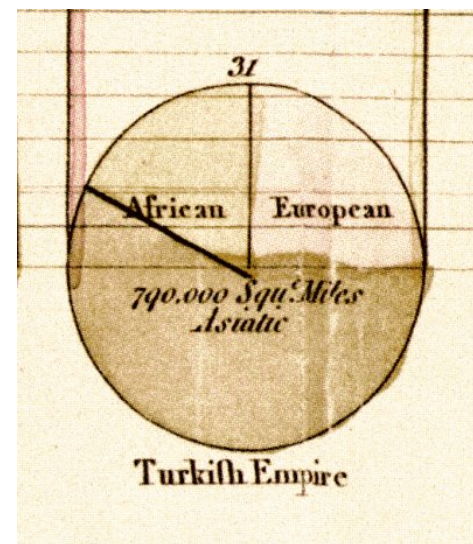
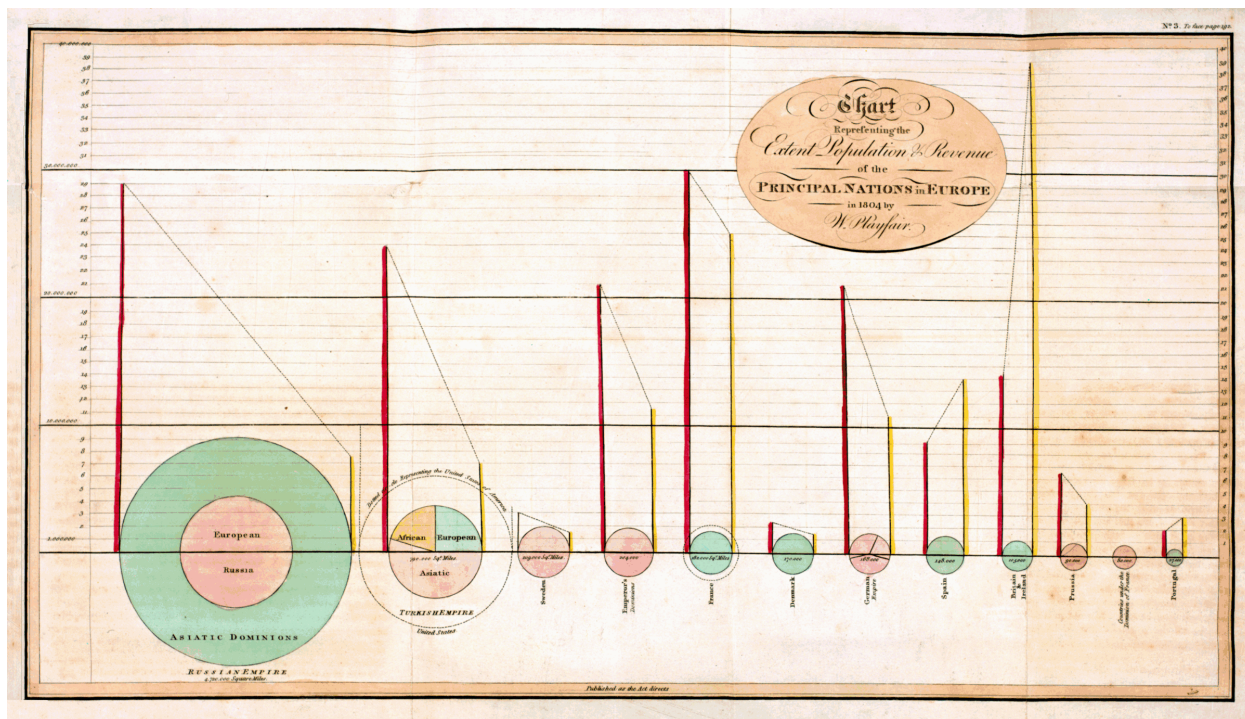
威廉·普莱费尔 (William Playfair , 1786) 绘制的线图

英格兰进出口时序数据



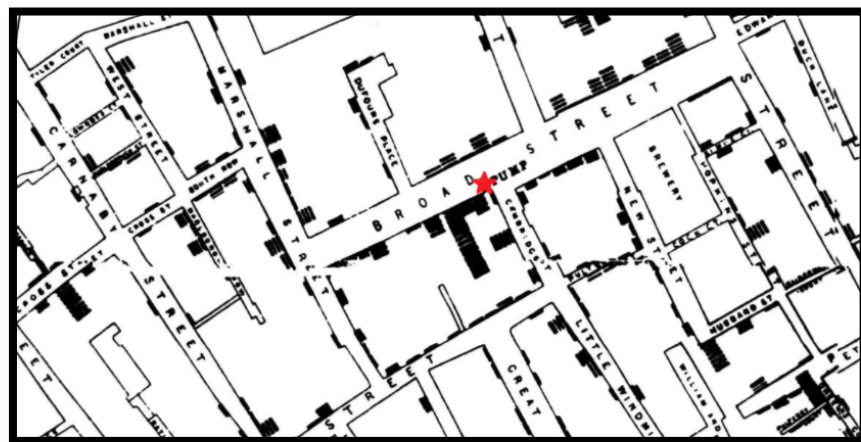
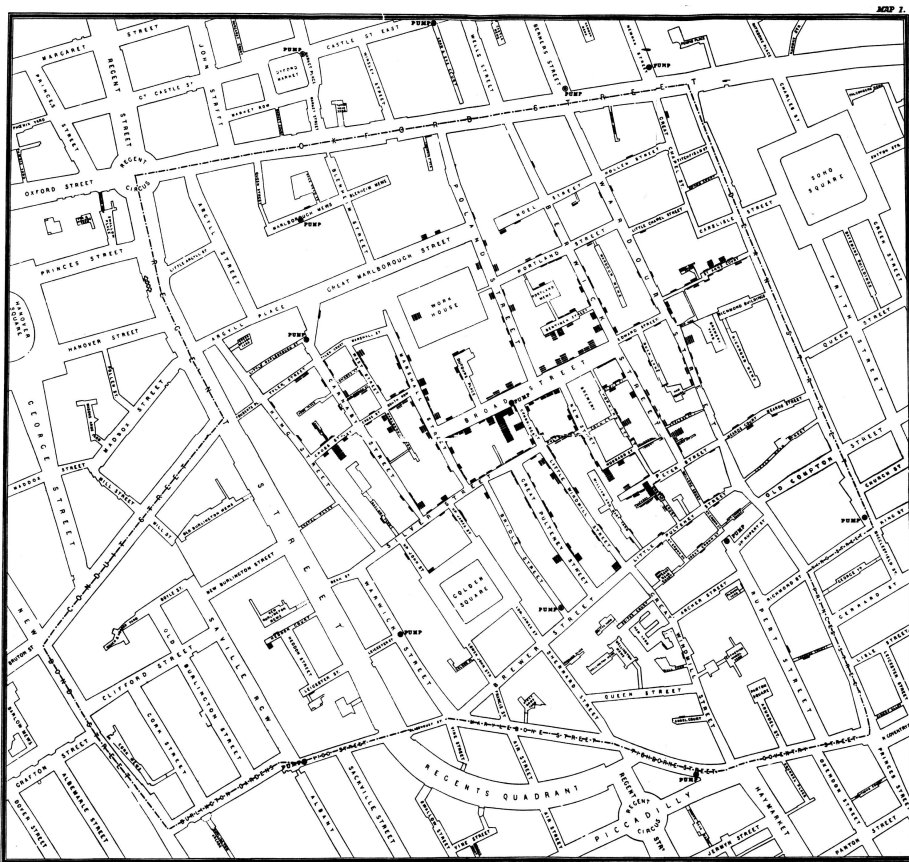
威廉·普莱费尔 (William Playfair , 1786) 绘制的条形图

苏格兰的贸易伙伴



威廉·普莱费尔（William Playfair, 1801）绘制的饼图

法国大革命前后一些欧洲国家的统计数据



1854 年英国 Broad 大街大规模爆发霍乱

约翰·斯诺 (John Snow) 绘制

<https://hiplot.com.cn/books-static/msg-book/history.html#section>

结构化与非结构化



结构化与非结构化



结构化数据

	A	B	C	D	E	F	G
1	species	island	culmen_length	culmen_depth	flipper_length	body_mass_g	sex
2	Adelie	Torgersen	39.1	18.7	181	3750	MALE
3	Adelie	Torgersen	39.5	17.4	186	3800	FEMALE
4	Adelie	Torgersen	40.3	18	195	3250	FEMALE
5	Adelie	Torgersen	NA	NA	NA	NA	NA
6	Adelie	Torgersen	36.7	19.3	193	3450	FEMALE
7	Adelie	Torgersen	39.3	20.6	190	3650	MALE
8	Adelie	Torgersen	38.9	17.8	181	3625	FEMALE
9	Adelie	Torgersen	39.2	19.6	195	4675	MALE
10	Adelie	Torgersen	34.1	18.1	193	3475	NA
11	Adelie	Torgersen	42	20.2	190	4250	NA
12	Adelie	Torgersen	37.8	17.1	186	3300	NA
13	Adelie	Torgersen	37.8	17.3	180	3700	NA
14	Adelie	Torgersen	41.1	17.6	182	3200	FEMALE
15	Adelie	Torgersen	38.6	21.2	191	3800	MALE
16	Adelie	Torgersen	34.6	21.1	198	4400	MALE
17	Adelie	Torgersen	36.6	17.8	185	3700	FEMALE

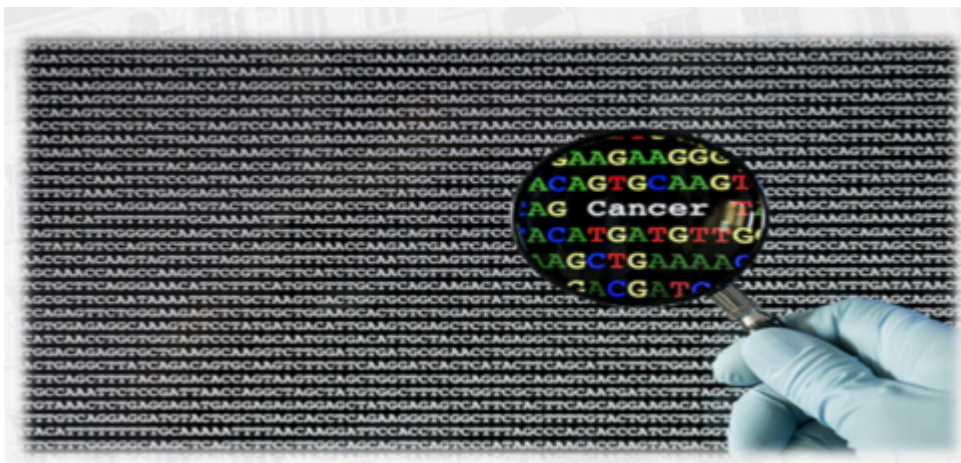
结构化与非结构化



半结构化数据

```
1
2
3  {
4    "MedlineCitation": {
5      "Status": "MEDLINE",
6      "Owner": "NLM",
7      "PMID": {
8        "Text": "30957634",
9        "Version": "1"
10     },
11     "DateRevised": {
12       "Year": "2020",
13       "Month": "11",
14       "Day": "24"
15     },
16     "Article": {
17       "PubModel": "Print-Electronic",
18       "Journal": {
19         "ISSN": {
20           "Text": "1554-8635",
21           "IssnType": "Electronic"
22         },
23         "JournalIssue": {
24           "CitedMedium": "Internet",
25           "Volume": "16",
26           "Issue": "1",
27           "PubDate": {
28             "Year": "2020",
29             "Month": "01"
30           }
31         },
32         "Title": "Autophagy",
33         "ISOAbbreviation": "Autophagy"
34       },
35       "ArticleTitle": {
36         "Text": "The gene is a negative regulator of autophagy and ULK1 protein stability.",
37         "I": [
38           "PARK10",
39           "USP24"
40         ]
41       }
42     }
43   }
44 }
```

结构化与非结构化



常见可视化图形

Distribution



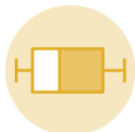
Violin



Density



Histogram



Boxplot



Ridgeline

——> 数据的分布规律

Correlation



Scatter



Heatmap



Correlogram



Bubble



Connected scatter



Density 2d

——> 数据变量间的关联规律

Ranking



Barplot



Spider / Radar



Wordcloud



Parallel



Lollipop



Circular Barplot

——> 数据的数值高低

Part of a whole



Grouped and Stacked barplot



Treemap



Doughnut



Pie chart



Dendrogram



Circular packing

——> 数据的归类及其占比

常见可视化图形

Evolution



Line plot



Area



Stacked area



Streamchart



Time Series

——> 数据（时间）演化规律

Map



Map



Choropleth



Hexbin map



Cartogram



Connection



Bubble map

——> 数据的空间规律

Flow



Chord diagram



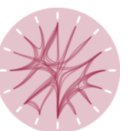
Network



Sankey



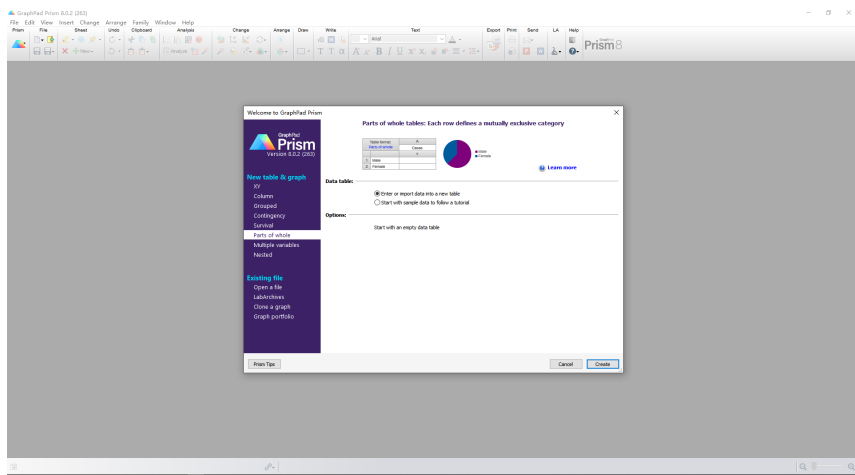
Arc diagram



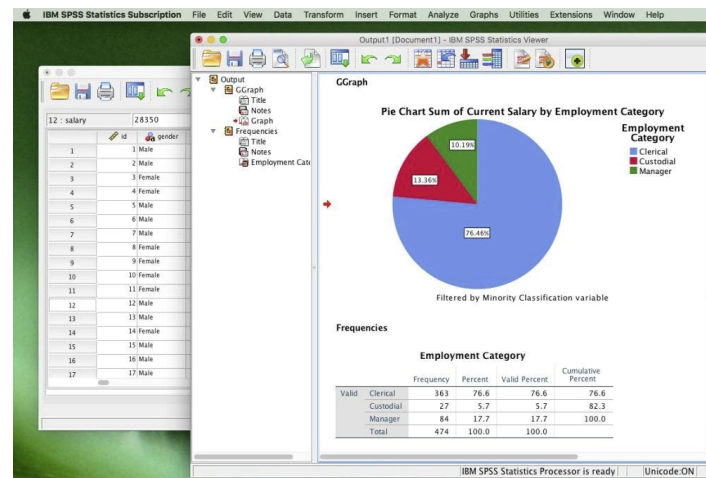
Edge bundling

——> 数据的流动和网路

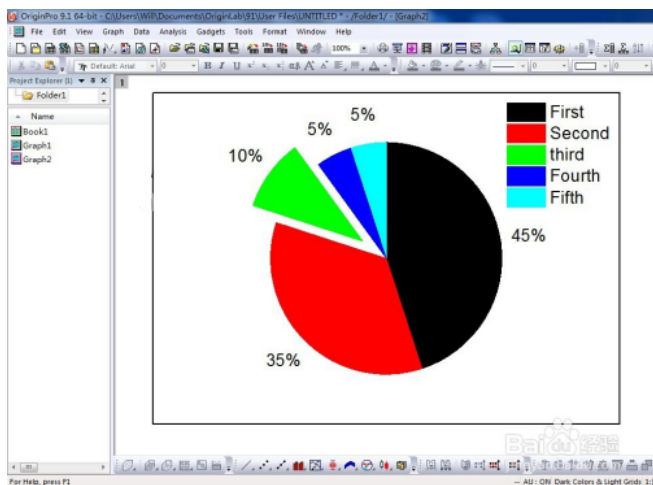
科研绘图实例 | 常用绘图工具



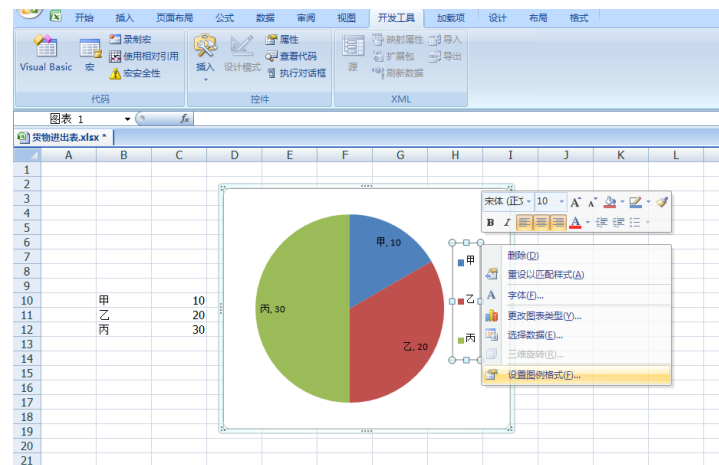
Graphpad



SPSS

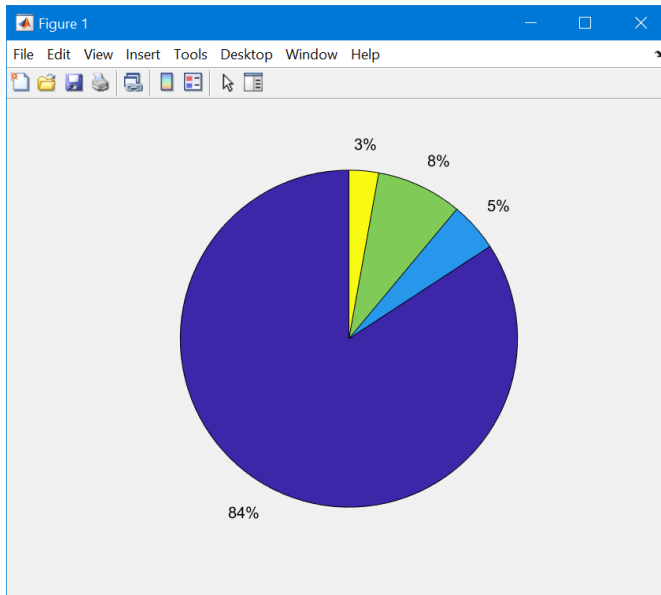


Origin

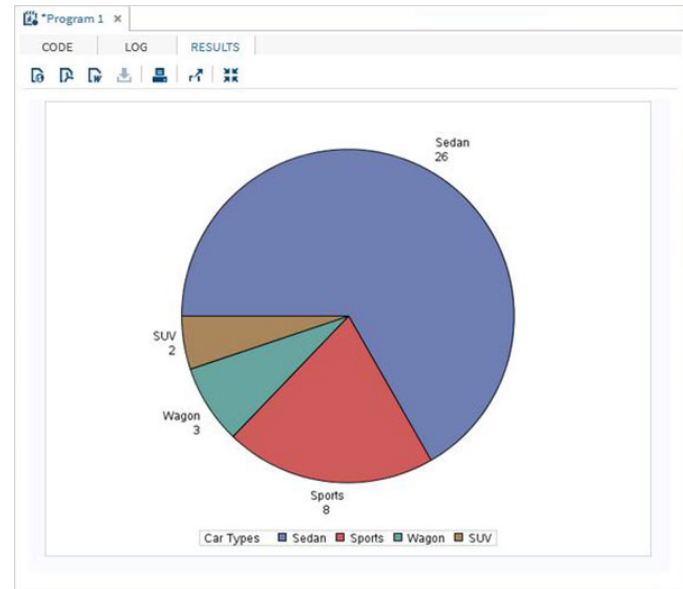


Excel

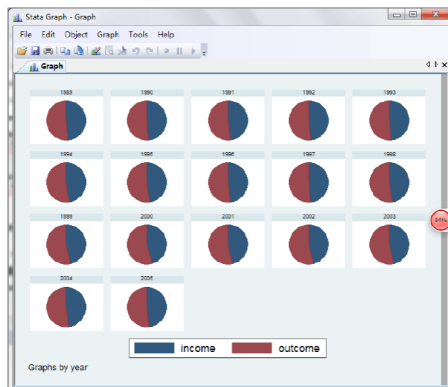
科研绘图实例 | 常用绘图工具



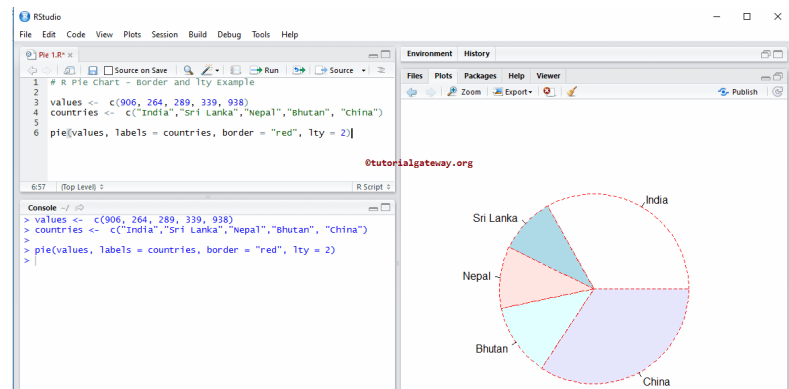
MATLAB



SAS

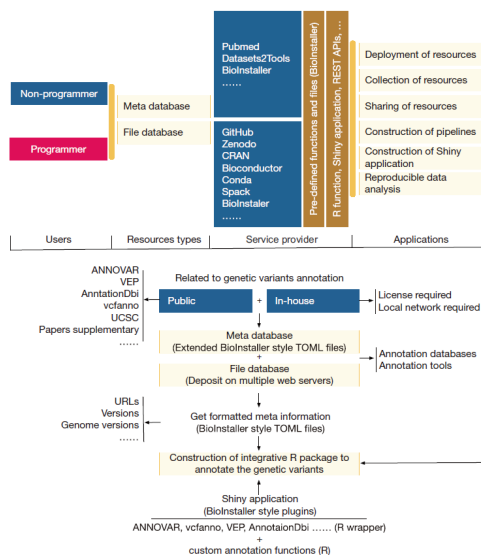
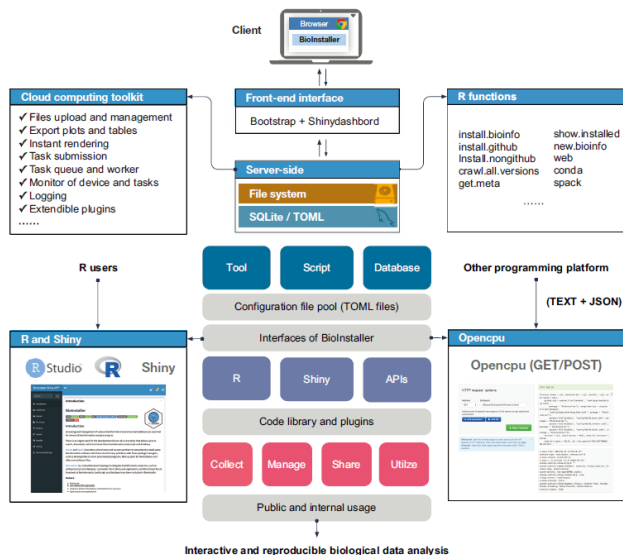
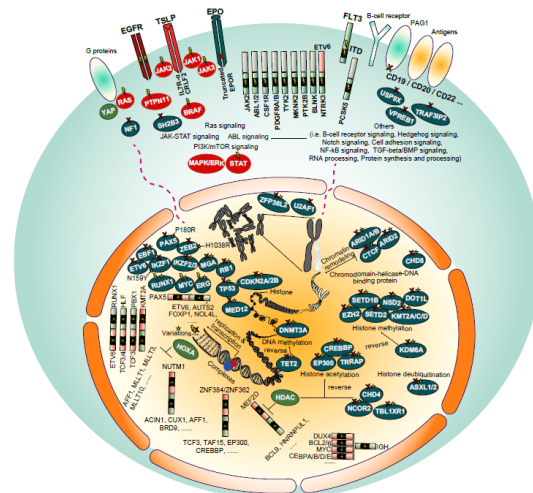
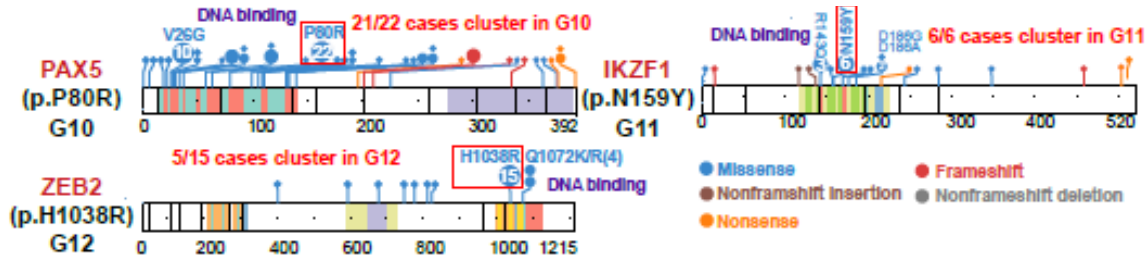


Stata



R

科研绘图实例 | 那些年画过的图

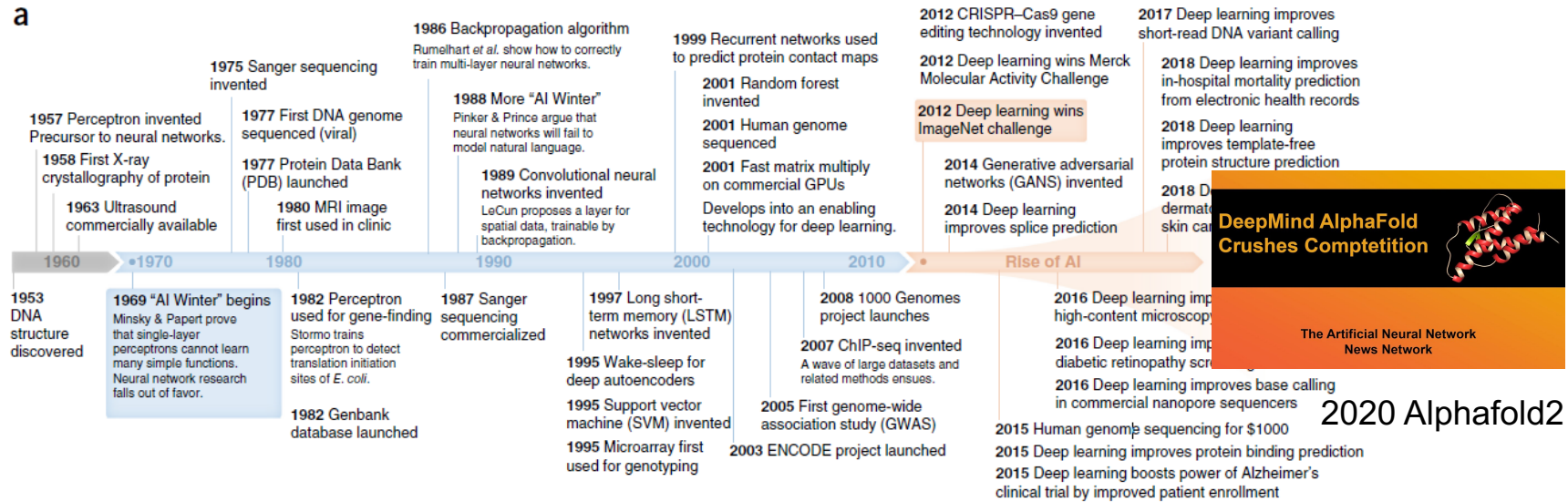


Major points for reproducible NGS data analysis projects		
Meta information	Regular directory structure and filenames	Unified pipelines/workflows
Analysis environment	Logging and History	Interactive results and document report

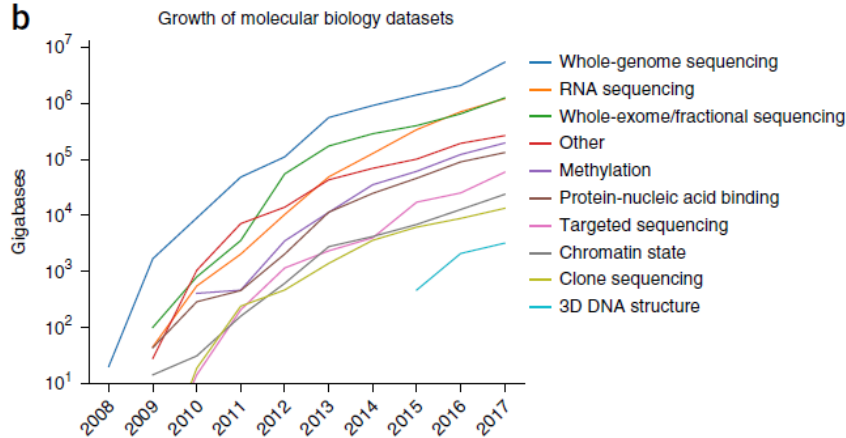
<p>Meta information (For all involved resources and computations.)</p> <pre> /path/project/{...}/meta.{json yaml toml} [SQLite MongoDB PostgreSQL MySQL ...] [xlsx for communication with collaborator] </pre>	<p>Regular directory structure and filenames</p> <pre> doc/ data/ analysis/ test/ download/ {...} {...}[wgs wes masseq chipseq ataseq ...] (time stamp)_{taskid}_{sampleid}{...} </pre>
<p>Unified pipelines/workflows</p> <pre> [Snakemake WDL Nextflow Bpipe ...] </pre> <p>Using fixed software parameters in the same project based on configuration files or command line scripts.</p> <p>Using pipelines/workflows with code quality control and assessment of performance.</p>	<p>Analysis environment</p>
<p>Logging and history</p> <p>Recording the executed tasks, commands and scripts with the date, system status, user id, etc. (Log files with unique index)</p> <p>Using version control tools for codes and analysis. Keeping backup copies of result. (with data analysis environment)</p>	<p>Interactive results and document report</p>

Hiplot 可视化平台简介 | 背景

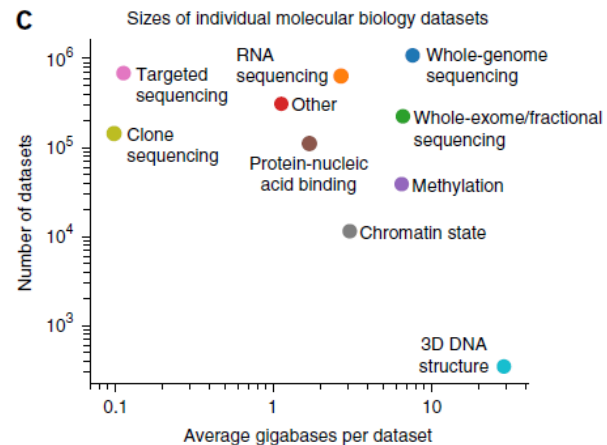
a



b

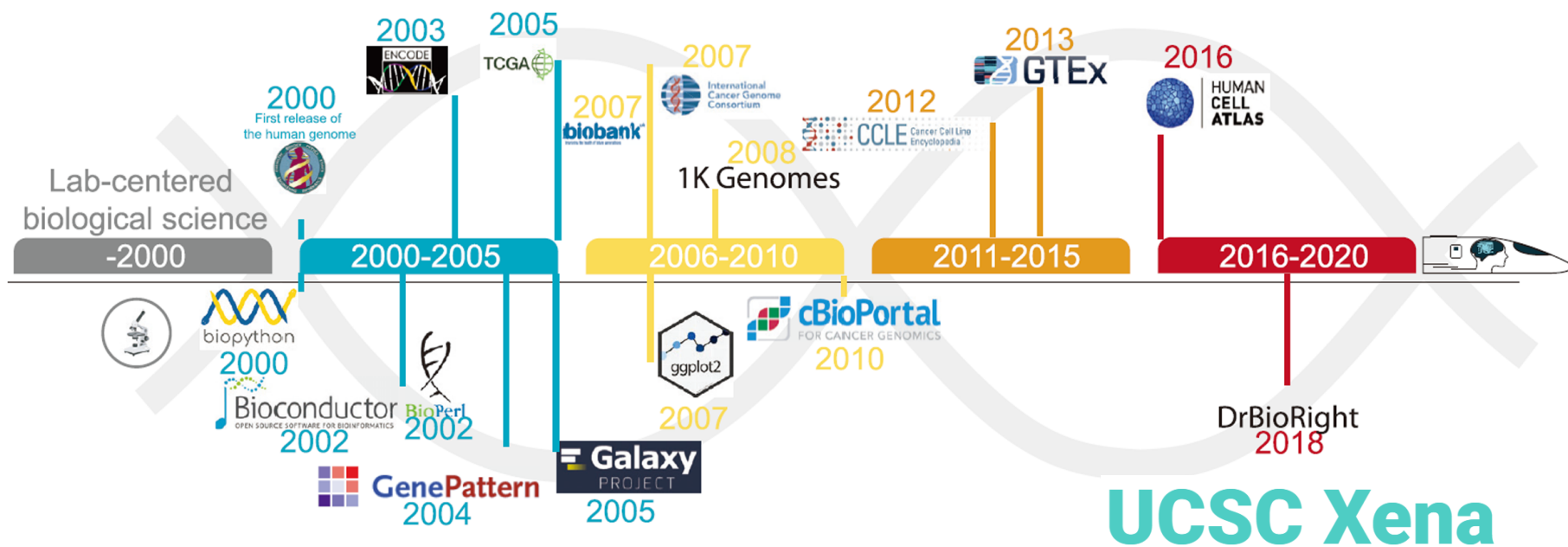


c



由技术和数据驱动的生物医学研究迎来发展黄金时期

Hiplot 可视化平台简介 | 背景



过去 20 年期间，组学数据相关的知名数据分析平台和工具

Hiplot 可视化平台简介 | 背景



Pinned

[tidyverse/ggplot2](#)
An implementation of the Grammar of Graphics in R
● R ☆ 4.7k 🍴 1.7k

[tidyverse/dplyr](#)
dplyr: A grammar of data manipulation
● R ☆ 3.6k 🍴 1.3k

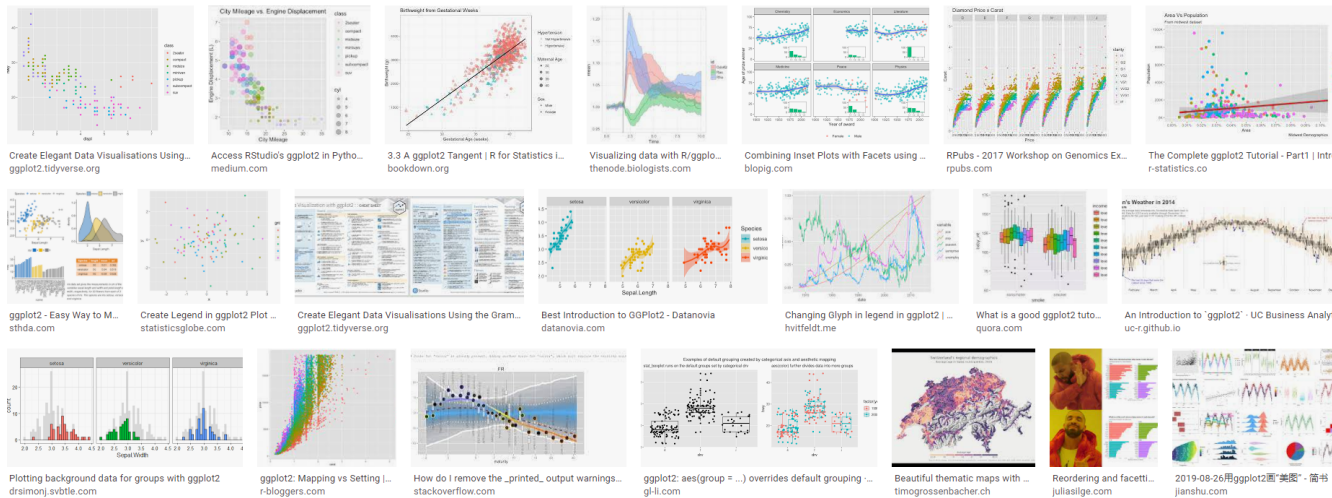
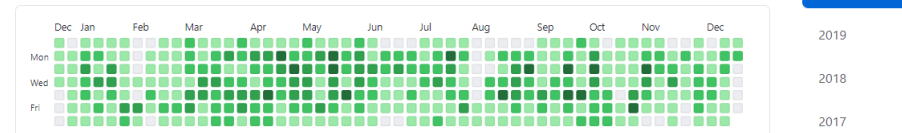
[tidyverse/tidyverse](#)
Easily install and load packages from the tidyverse
● R ☆ 977 🍴 207

[r4ds](#)
R for data science: a book
● R ☆ 2.7k 🍴 3.3k

[r-lib/devtools](#)
Tools to make an R developer's life easier
● R ☆ 2k 🍴 709

[adv-r](#)
Advanced R: a book
● TeX ☆ 1.8k 🍴 1.6k

4,446 contributions in the last year



Hadley Wickham

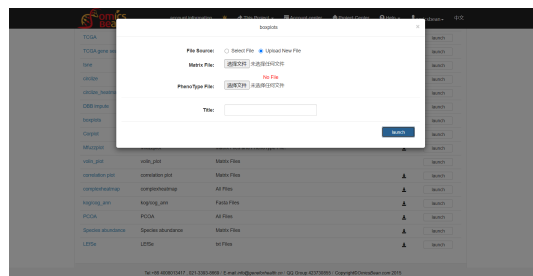
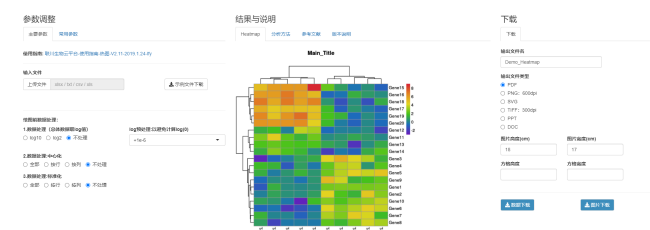
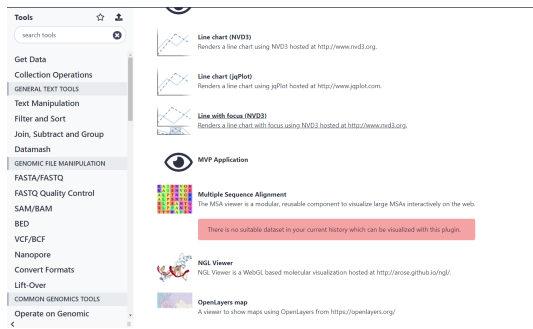




HI PLOT

Hiplot 可视化平台简介 | 背景

动机和目标



我们希望构建一个更优秀、更全面的工具

(重新定义科研数据可视化云工具)

界面简洁、上手简单、即开即用、无广告、不收费

功能丰富、易扩展

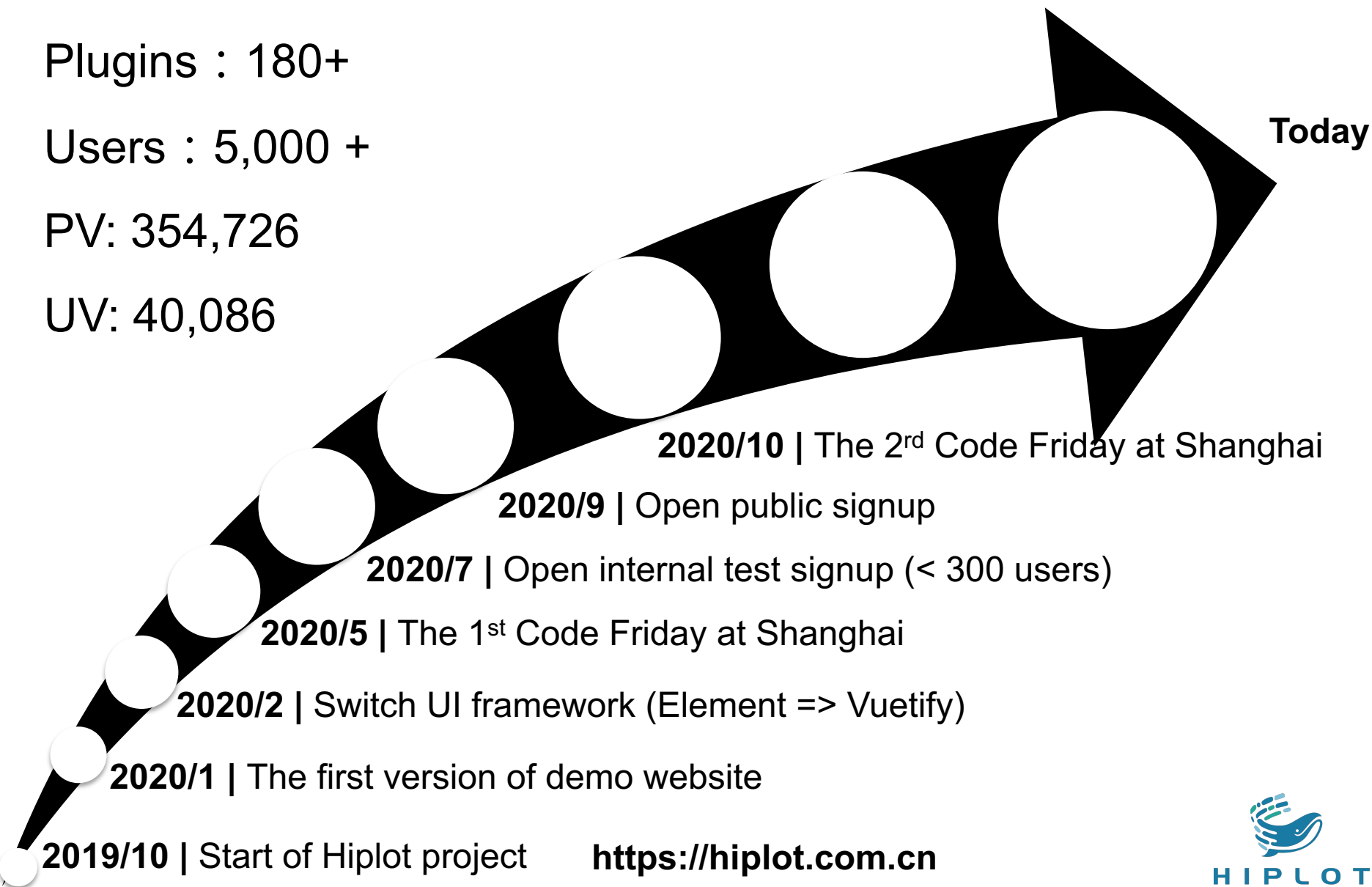
Hiplot 可视化平台简介 | 发展历程

Plugins : 180+

Users : 5,000 +

PV: 354,726

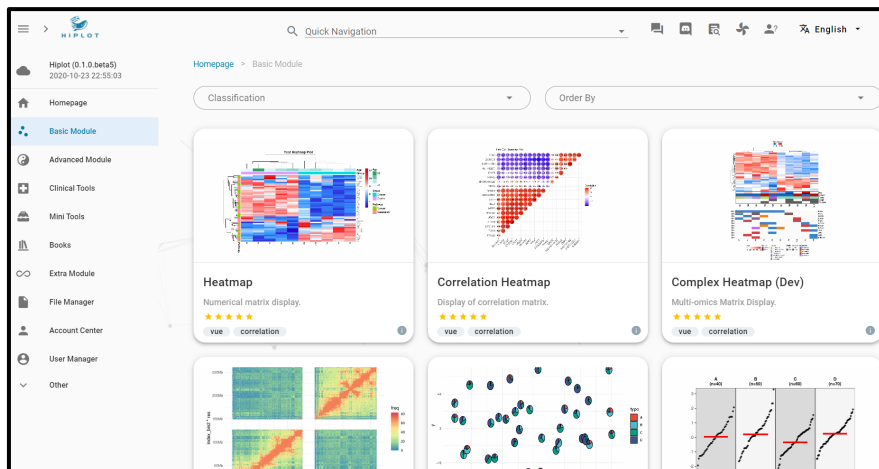
UV: 40,086



<https://hiplot.com.cn>

Hiplot 可视化平台简介 | 主要模块

Web Interface



CLI

```
ljf@head1 ~$ hctl
Command-line client to draw plots of [Hiplot](https://hiplot.com.cn) website. More se

Usage:
hctl [flags]
hctl [command]

Available Commands:
config  Initializing a config.json file of hiplot application.
help    Help about any command
login   Login Hiplot Website.
plot    Plot functions of Hiplot Website.

Flags:
-h, --help                help for hctl
--log-dir string          log dir. (default "/cluster/home/ljf/_log")
-o, --out-dir string       output dir. (default "/cluster/home/ljf")
--save-log                Save log to file.
-k, --task-id string       task ID (default is random). (default "d4f728c2-1d33-4559-bb
--verbose int              verbose level (0:no output, 1: basic level, 2: with env info
-v, --version              version for hctl

Use "hctl [command] --help" for more information about a command.
```

Basic, Advanced, Mini-tools, and Clinical-tools Modules

File Manager

Task Manager

User Manager

Setting

Extra Module

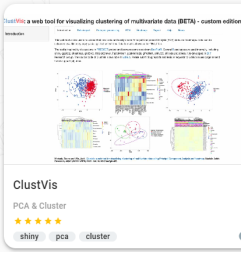
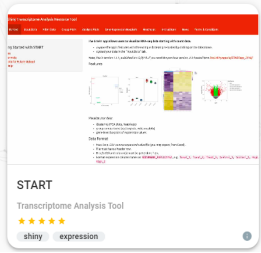
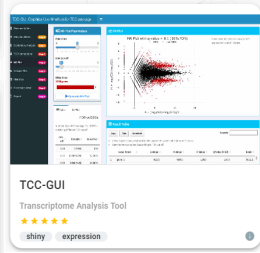
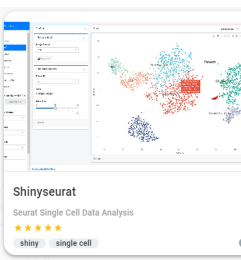
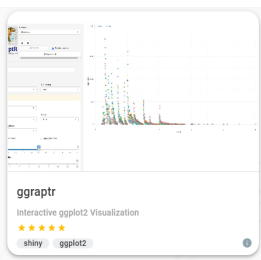
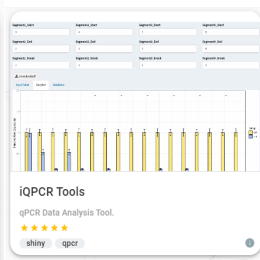
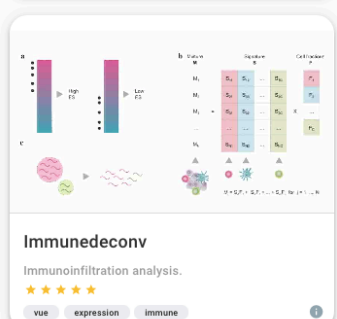
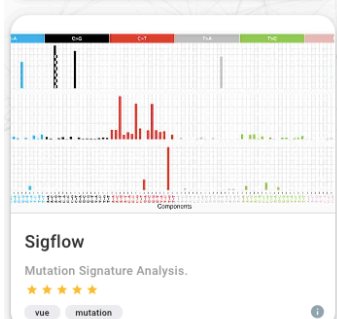
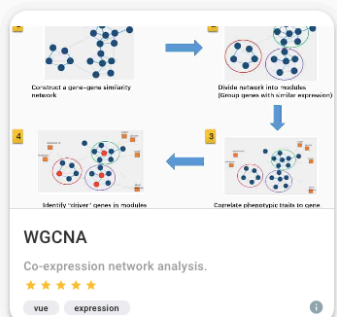
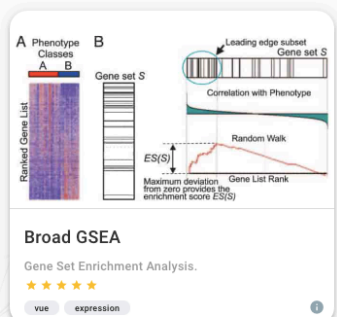
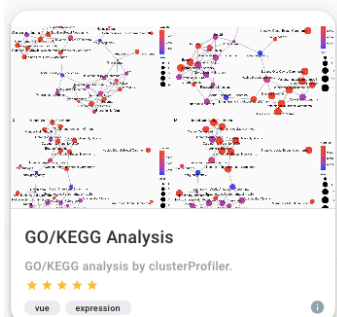
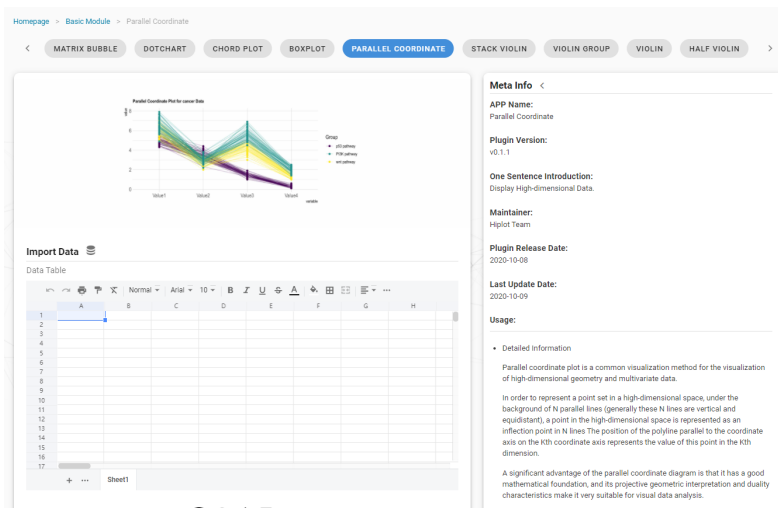
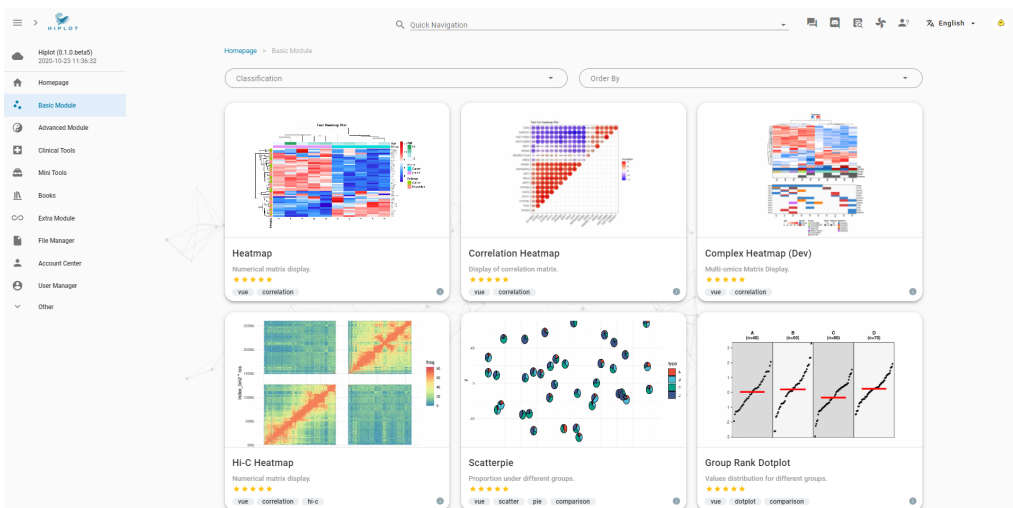
Q&A

Feedback

Mirrors

Components of Hiplot

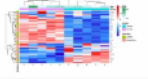
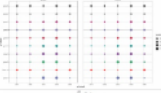
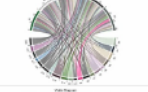
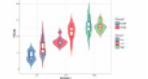
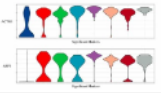
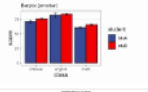
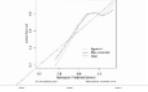
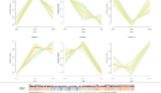

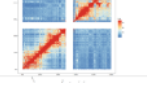
Hiplot 可视化平台简介 | 网页接口



Screenshot of Hiplot



Hiplot 可视化平台简介 | 网页接口

	A	B	C	D	E	F	G	H
1	Tool Name	Tags	Module	Description	Input	Output & Interpretation	App Address	Thumbnail
2	Heatmap	Correlation	Basic	An intuitive and visual method for analyzing the distribution of data	Numeric matrix (i.e. FPKM and TPM)	Represent the levels of input data (i.e. gene expression); conduct unsupervised clustering finding potential patterns	https://hiplot.com.cn/basic/heatmap	
3	Matrix Bubble	Gene Expression	Basic	The color matrix bubble is used to visualize the expression matrix data of multiple genes (rows) in various cells (columns).	<1st-col>: (String) cell sample name as X axis, <2nd-col>: (String) gene name as the Y axis, <3rd-col>: (Numeric) Gene expression, [4th-col]: (String) groups.	Color matrix bubble diagram of genes expression level in multiple cells.	https://hiplot.com.cn/basic/matrix-bubble	
4	Chord Plot	Interaction	Basic	The complex interaction is visualized in the form of chord graph.	Data frame or matrix of interaction of genes with pathways or gene ontologies.	Chord graph of genes with KEGG pathways or GO terms.	https://hiplot.com.cn/basic/chord	
5	Violin Group	Comparison	Basic	Violin and box plot of grouped data with T-test.	Data frame. <1st-col>: (Numeric) value data, <2nd-col>: (String) 1st-rank groups, <3rd-col>: (String) 2nd-rank groups.	Visualizing all data that meets this need and structure.	https://hiplot.com.cn/basic/violin-group	
6	Stack Violin	Gene Expression	Basic	The expression of key genes in each cluster in single-cell transcriptomic (Single Cell RNA-Seq) analysis.	Gene expression matrix. Gene expression matrix in all cells and groups in single cell transcriptome analysis (Single Cell RNA-Seq).	Stacked violin diagram of key genes (Y axis) and cell clusters (X axis). Genes expression value are presented by violins.	https://hiplot.com.cn/basic/stack-violin	
7	Barplot (Errorbar)	Comparison	Basic	Bar plot with error-lines and groups.	Data frame. <1st-col>: (Numeric) values as Y-axis. <2nd-col>: (Numeric or String) classes as X-axis. <3rd-col>: (String) groups as colors and legend.	Bar plot with error-lines and groups. The color and width of error-lines can be regulated by web components.	https://hiplot.com.cn/basic/barplot-errorbar	
8	Calibration Curve	Model	Basic	The calibration curve is used to evaluate the consistency / calibration, i.e. the difference between the predicted value and the real value	Data frame of multi columns data (Numeric allow NA). i.e the survival data (status with 0 and 1).	Calibration curve visualization of LM or COX model.	https://hiplot.com.cn/basic/calibration-curve	
9	Gene Cluster Trend	Gene Expression Clustering	Basic	Visualization and soft clustering of time series gene expression data based on Mfuzz R package.	Gene expression matrix. A data frame of multi-column data with the first column contains unique gene IDs and the rest of the columns contains time series gene expression data.	Multi-line charts displaying different gene expression trends based on soft clustering.	https://hiplot.com.cn/basic/gene-trend	
10	Gene Density	Density	Basic	The gene density plot is used to calculate gene density across every chromosome and visualize their distribution on the chromosome.	Two files containing the chromosome length and gene positions on the chromosome. Each file contains three columns, the first with the chromosome name, the second and third with the start and end position of every gene or chromosome.	Gene density distribution across every chromosome.	https://hiplot.com.cn/basic/gene-density	
11	HiC Heatmap	Correlation	Basic	The HiC heatmap is used to display the interaction frequency matrix of HiC data with selected resolution.	Numeric matrix. A data frame containing three columns, the first with the bin1 index, the second with the bin2 index and the third with the frequency value.	Heatmap displaying the frequency intensity between two different bin sites across every chromosome.	https://hiplot.com.cn/basic/hic-heatmap	

Hiplot 可视化平台简介 | 网页接口

	Tool Name	Tags	Module	Description	Input	Output & Interpretation	App Address	Thumbnail
18	Genome Circos	Genomics	Advance	The information contained in genome is displayed in the form of circle in the whole genome map.	Multiple files include chrome data as outermost ring, heatmap data, histogram data, scatter data, ribbon data, link data, etc.	Genome multiple circles ring from outermost to innermost ring to display genome information.	https://hiplot.com.cn/advance/genome-circos	
19	Gene ID Convert	Gene	Advance	According to the information records of genes in a variety of databases, the ID of multiple genes is converted into the ID of one or more databases.	One column contains the gene ID.	A data frame contains multi-columns gene ids corresponding databases.	https://hiplot.com.cn/advance/genome-circos	
20	miRNA Gene Prediction	MiRNA	Advance	Simultaneously search multiple miRNA databases to predict the target genes of miRNA.	The name of one or more miRNAs. File or input in area of text is supported.	A data frame contains miRNA and target genes with detail information from differential miRNA databases.	https://hiplot.com.cn/advance/mirna-prediction	
21	Point Density	Combination	Advance	Integrate scatter plot and density plot together to visualize complex grouped data.	Data frame. <1st-col>: (Numeric) X-axis data. <2nd-col>: (Numeric) Y-axis data. <3rd-col>: (String) groups name.	A diagram of integrating scatter and density plots.	https://hiplot.com.cn/advance/point-density	
22	RDA Visual	Dimension Reduction	Advance	Redundancy analysis (RDA) is a sort method combining regression analysis with principal component analysis, and it is also an extension of multiple response regression analysis.	Three tables needed. <1st-table>: (Data frame) species data. <2nd-table>: (Data frame) environment data. <3rd-table>: (Data frame) simple with group data.	Diagram. Dimension reduction thinking solves the problem of correlation between species and environmental factors and visualizes the results.	https://hiplot.com.cn/advance/rda-visual	
23	Echarts	Animation	Advance	The data interface of echarts.js is integrated into R language and the data and visualization process are controlled by web components.	Data frame for different applications.	Diagrams of bar plot, line plot, scatter plot, etc.	https://hiplot.com.cn/advance/echarts	
24	T-SNE Ellipse	Dimension Reduction	Advance	T-SNE: t-distributed Stochastic Neighbor Embedding.	Data frame. <1st-col>: (String) record id as point label. <mid-col>: (Numeric) middle cols with numeric value <end-col>: (String) groups name.	Diagram with points, arrows, 95%CI ellipses after t-SNE dimension reduction.	https://hiplot.com.cn/advance/tsne-ellipse	
25	UMAP Ellipse	Dimension Reduction	Advance	Uniform Manifold Approximation and Projection for Dimension Reduction	Data frame. <1st-col>: (String) record id as point label. <mid-col>: (Numeric) middle cols with numeric value <end-col>: (String) groups name.	Diagram with points, arrows, 95%CI ellipses after UMAP dimension reduction.	https://hiplot.com.cn/advance/umap-ellipse	
26	Forestplot	Survival Analysis	Advance	In addition to meta-analysis, forest mapping is also widely used in observational studies and clinical trials, such as risk analysis / survival analysis.	Two tables needed. <1st-table>: <1st-col>: (Numeric) mean data. <2nd-col>: (Numeric) lower data. <3rd-col>: (Numeric) upper data. <2nd-table>: (String or Numeric) text table.	Diagram of forest plot.	https://hiplot.com.cn/advance/forestplot	
27	CM Plot	Genetic Variation	Advance	A high-quality drawing tool designed for Manhattan plot of genomic analysis.	Data frame. <1st-col>: (String) SNP ID. <2nd-col>: (Numeric) chromosome ID. <3rd-col>: (Numeric) position. <4th-col> ~ <nth-col>: (Numeric)	Diagrams with circular_manhattan, rectangular_manhattan, multitracks_manhattan, multitraits_manhattan, snp_density, qqplot, multitracks_qqplot and multitraits_qqplot.	https://hiplot.com.cn/advance/cmplot	

Hiptot 可视化平台简介 | 命令行程序

```
Command-line client to draw plots of [Hiptot](https://hiplot.com.cn) website. More see here https://github.com/hiplot.

Usage:
  hctl [flags]
  hctl [command]

Available Commands:
  config      Initializing a config.json file of hiplot application.
  help        Help about any command
  login       Login Hiplot Website.
  plot        Plot functions of Hiplot Website.

Flags:
  -h, --help                help for hctl
  --log-dir string          log dir. (default "/home/cfd/code-friday/part2/se07/_log")
  -o, --out-dir string      output dir. (default "/home/cfd/code-friday/part2/se07")
  --save-log                Save log to file.
  -k, --task-id string      task ID (default is random). (default "001667f9-c2d2-43a9-8952-4f93e60b0cbc")
  --verbose int             verbose level (0:no output, 1: basic level, 2: with env info) (default 1)
  -v, --version            version for hctl

Use "hctl [command] --help" for more information about a command.
```

```
# https://hiplot.com.cn/docs/download/#hctl
```

```
hctl plot -c _demo/heatmap/config2.json -t heatmap -o /tmp/hiplot-pure-remote-data-mode
```

```
hctl config basic/heatmap
```

这是我在世界范围内看到的最好的生信产品。

木烁 (知乎用户)

在我个人看来这个平台的意义不亚于 ggplot 的发布
(ggplot 也是大神的博士论文,基本上重新定义了 R
绘图的方式)。

Hplot 可视化平台简介 | 数据的导入和导出

Upload File

Upload File

File Name	File Size	Progress	Speed	Status	Operation
Rows per page: 5 < >					
< >					

Set Upload Directory: upload

🔍 📧 📁 📄 ▶ 🔄 ✕

Upload File

Upload File

File Name	File Size	Progress	Speed	Status	Operation
ng.3969.pdf	588.83 KB	<div style="width: 21.73%; background-color: #00728f; height: 10px;"></div> 21.73%	80.00 KB	Uploading	🔄 ▶ ✕
Rows per page: 5 1-1 of 1 < >					
< 1 >					

Set Upload Directory: upload

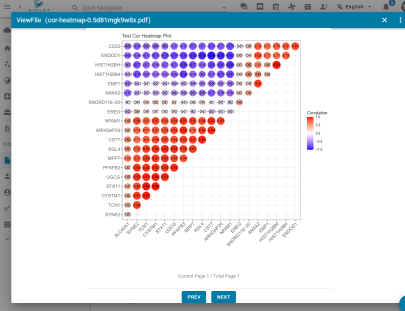
🔍 📧 📁 📄 ▶ 🔄 ✕

View File

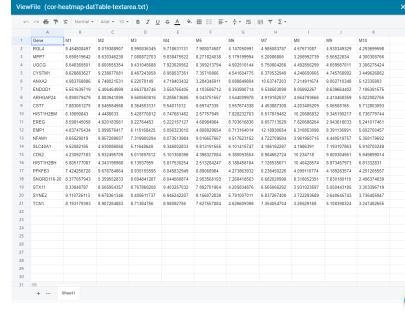
Search 🔍

File/Directory Name	Modified Date	Detail
▶ 📁 data	2020-10-06 04:06	152.23 MB ⓘ
▶ 📁 public	2020-09-29 22:07	21.54 GB ⓘ
▶ 📁 tasks	2020-11-15 22:07	210.34 MB ⓘ
▶ 📁 upload	2020-11-22 12:02	207.10 MB ⓘ

📁 + + + 📄 📄 🗑️



View file (cor-heatmap-d4f1461e1991.pdf)



View file (cor-heatmap-d4f1461e1991.xlsx)



View file (prams.json)

文件管理模块

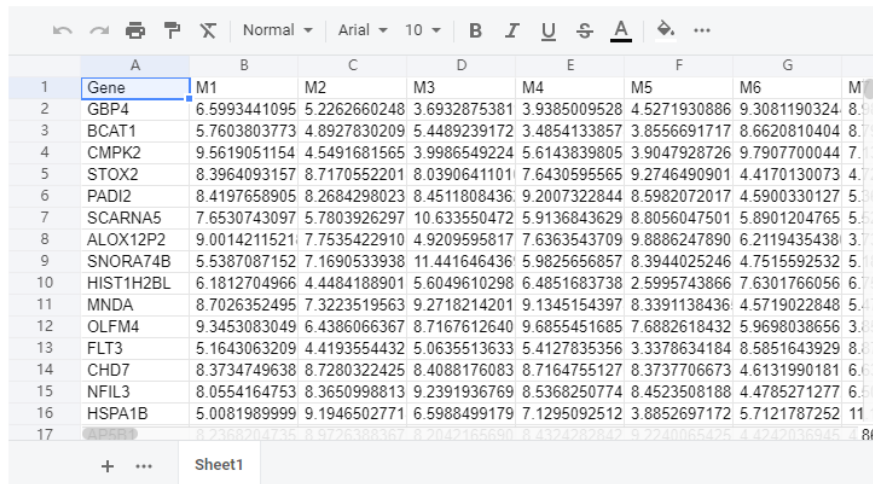


HIPLIT

Hiplot 可视化平台简介 | 数据的导入和导出

Import Data 

Counts



	A	B	C	D	E	F	G	M
1	Gene	M1	M2	M3	M4	M5	M6	M
2	GBP4	6.5993441095	5.2262660248	3.6932875381	3.9385009528	4.5271930886	9.3081190324	8.
3	BCAT1	5.7603803773	4.8927830209	5.4489239172	3.4854133857	3.8556691717	8.6620810404	8.
4	CMPK2	9.5619051154	4.5491681565	3.9986549224	5.6143839805	3.9047928726	9.7907700044	7.
5	STOX2	8.3964093157	8.7170552201	8.0390641101	7.6430595565	9.2746490901	4.4170130073	4.
6	PADI2	8.4197658905	8.2684298023	8.4511808436	9.2007322844	8.5982072017	4.5900330127	5.
7	SCARNA5	7.6530743097	5.7803926297	10.633550472	5.9136843629	8.8056047501	5.8901204765	5.
8	ALOX12P2	9.0014211521	7.7535422910	4.9209595817	7.6363543709	9.8886247890	6.2119435438	3.
9	SNORA74B	5.5387087152	7.1690533938	11.441646436	5.9825656857	8.3944025246	4.7515592532	5.
10	HIST1H2BL	6.1812704966	4.4484188901	5.6049610298	6.4851683738	2.5995743866	7.6301766056	6.
11	MNDA	8.7026352495	7.3223519563	9.2718214201	9.1345154397	8.3391138436	4.5719022848	5.
12	OLFM4	9.3453083049	6.4386066367	8.7167612640	9.6855451685	7.6882618432	5.9698038656	3.
13	FLT3	5.1643063209	4.4193554432	5.0635513633	5.4127835356	3.3378634184	8.5851643929	8.
14	CHD7	8.3734749638	8.7280322425	8.4088176083	8.7164755127	8.3737706673	4.6131990181	6.
15	NFIL3	8.0554164753	8.3650998813	9.2391936769	8.5368250774	8.4523508188	4.4785271277	6.
16	HSPA1B	5.0081989999	9.1946502771	6.5988499179	7.1295092512	3.8852697172	5.7121787252	11
17								8F



表格模式

Import Data 



文件选择模式

在绘图插件内导入和导出数据

Hiplot 可视化平台简介

Set Parameters

General Parameters

Task Name 36 / 80

Color Theme

Image Export

Width 10

Height 6

Extra Parameters

X-axis Label

Y-axis Label

Draw Cluster Centre Line

clusterNum 6

Threshold 0.25

minStd 0

绘图参数的导入和导出

Hiplot 可视化平台简介

Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Gene	Time1	Time2	Time3				
2	Gene1	0.177499257	1.656322608	-1.152599476				
3	Gene2	-0.503725421	-0.520702419	0.464160706				
4	Gene3	0.105031041	0.607924643	0.728932466				
5	Gene4	-1.179153671	0.434008479	0.410617452				
6	Gene5	0.836897519	-0.704741404	-1.461147201				
7	Gene6	0.261176197	0.1351524	-0.018908087				
8	Gene7	-0.980908166	-1.816985462	1.693447821				
9	Gene8	2.232676289	0.167520631	0.00939061				
10	Gene9	-0.585196644	0.270986389	0.496784993				
11	Gene10	-0.90649207	0.566325965	0.166798808				
12	Gene11	-0.896435942	-0.491282333	-0.236924039				
13	Gene12	-0.528919528	0.494414799	0.444865788				
14	Gene13	0.259194244	-1.870171587	-1.254028069				
15	Gene14	-0.220309225	1.263925046	0.033874233				
16	Gene15	1.540422524	-0.66082959	0.011670427				
17								

Step 1

设置远程文件路径

Import Data

Data Table
public/demo/gene-trend/data.csv

TEMPORARY CACHE PREVIEW

Search

Task Name	Temp Code	Task Status	Submit Date	Operation
0d8ffd10-2c78-11eb-9079-e9f202c9a2a2	ti2KMPw	Finished	2020-11-22 12:06	

Rows per page: 5 1-1 of 1

Time limit: 3 hours for unregistered users, 12 hours for registered users

导入原始数据拷贝



Set Parameters

Step 2

General Parameters

Task Name: 46a77cf0-2c8b-11eb-9079-e9 36 / 80

Color Theme: Spectral

Image Export: png pdf

Width: 10 Height: 6

Extra Parameters

X-axis Label: Time

Y-axis Label: Expression changes

Draw Cluster Centre Line

clusterNum: 6 Threshold: 0.25

minStd: 0

SUBMIT RESET DEMO

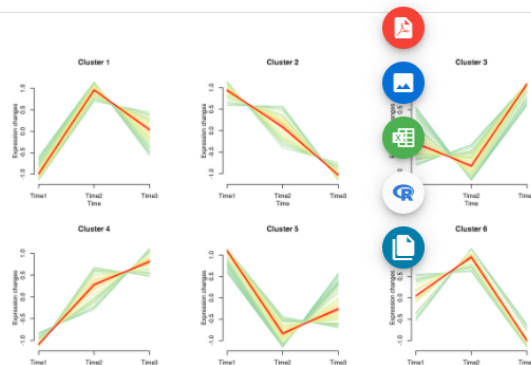
设置参数

提交绘图任务

即时查看任务状态

Step 3

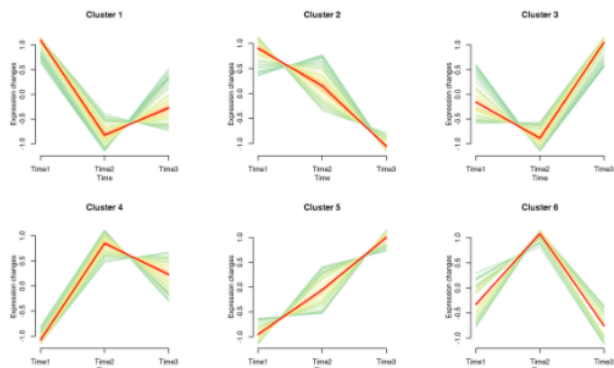
TEMPORARY CACHE PREVIEW



结果预览和下载

Hiplot 可视化平台简介

TEMPORARY CACHE PREVIEW



TEMPORARY CACHE PREVIEW

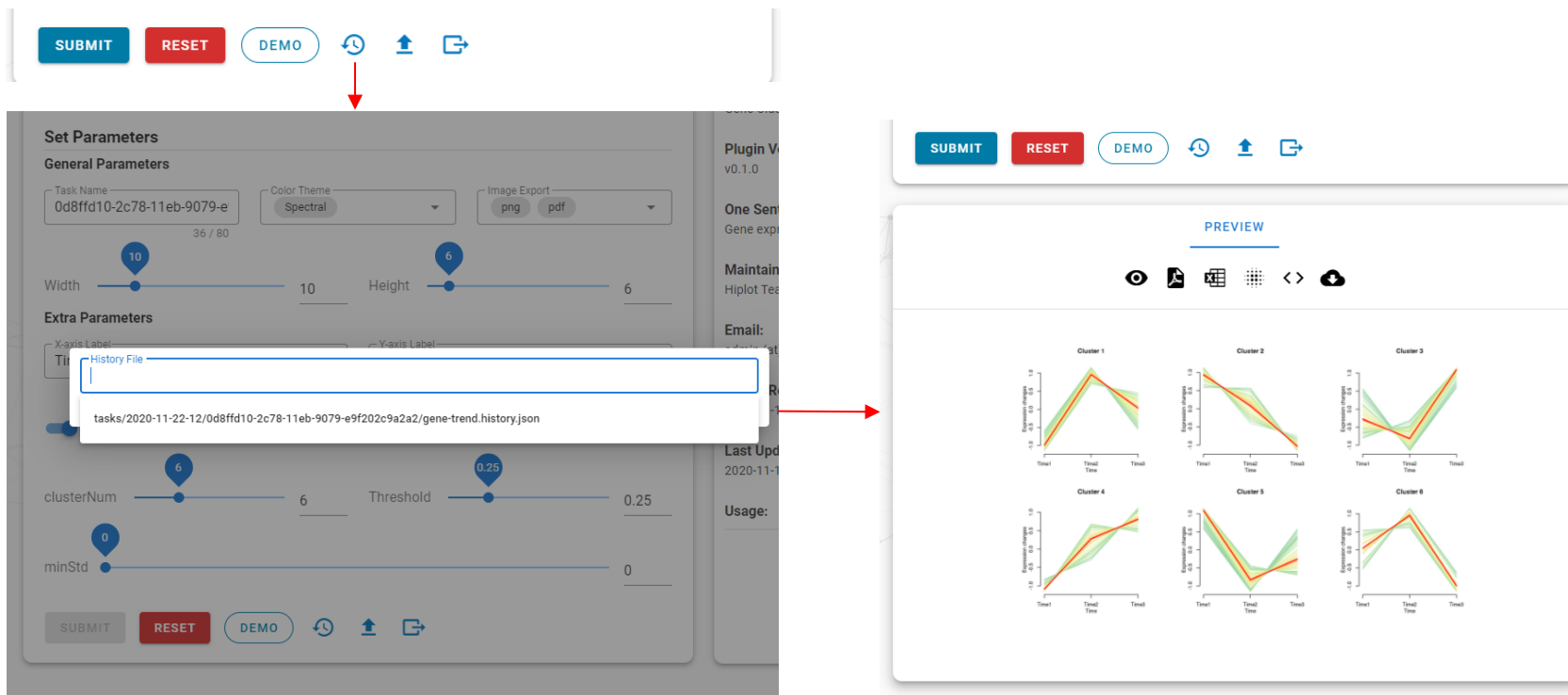


Success: tasks/2020-11-22-12/9c467eb0-2c7a-11eb-9079-e9f202c9a2a2

确定

同步任务至云端文件库

Hiplot 可视化平台简介





从云端加载绘图任务结果

Hiplot 可视化平台简介

NOTICE LOCAL TASKS REASOURCE USAGE

Search

	ti2KMPw	Finished	2020-11-22 12:06	🔍
	y8Phjj3	Finished	2020-11-22 11:50	🔍
	yxf6sAA	Finished	2020-11-22 10:34	🔍
	mthN6ec	Finished	2020-11-21 23:33	🔍
	JeGXhX2	Finished	2020-11-21 22:57	🔍
	ckSvwD	Finished	2020-11-21 22:56	🔍



List of all local tasks

```
{
  {
    "module": "basic",
    "tmpcode": "ti2KMPw",
    "taskname": "0d8ffd10-2c78-11eb-9079-e9f202c9a2a2",
    "status": "2",
    "submit_date": "2020-11-22T04:06:14.835Z",
    "finish_date": "2020-11-22T04:06:21.687Z",
    "tool": "gene-trend",
    "history": "/tmp/hiplot-tasks/0d8ffd10-2c78-11eb-9079-e9f202c9a2a2/ti2KMPw/gene-trend.history.json"
  },
  {
    "module": "mini-tools",
    "tmpcode": "y8Phjj3",
    "taskname": "d76e2dd0-2c75-11eb-9079-e9f202c9a2a2",
    "status": "2",
    "submit_date": "2020-11-22T03:50:22.584Z",
    "finish_date": "2020-11-22T03:50:28.349Z",
    "tool": "pdf-collage",
    "history": "/tmp/hiplot-tasks/d76e2dd0-2c75-11eb-9079-e9f202c9a2a2/y8Phjj3/pdf-collage.history.json"
  },
  {
    "module": "basic",
    "tmpcode": "yxf6sAA",
    "taskname": "3b842190-2c6b-11eb-b2cd-fd91424e3253",
    "status": "2",
    "submit_date": "2020-11-22T02:34:28.542Z",
    "finish_date": "2020-11-22T02:34:32.640Z",
    "tool": "barplot-errorbar",
    "history": "/tmp/hiplot-tasks/3b842190-2c6b-11eb-b2cd-fd91424e3253/yxf6sAA/barplot-errorbar.history.json"
  },
}
```

Exported tasks info

导出和导入临时任务记录



HI PLOT

实践是检验真理的唯一标准 - 毛泽东选集

Hplot 可视化平台操作演示 | 基础模块

Test Scatter Plot

Histogram
Display data distribution.
★★★★★
vue distribution

Pyramid Chart

Pyramid Chart
Display data values.
★★★★★
vue distribution

Barplot

Barplot
Display data values.
★★★★★
vue distribution

Violin Group

Violin Group
Display the data distribution.
★★★★★
vue distribution

Violin

Violin
Display the data distribution.
★★★★★
vue distribution

Half Violin

Half Violin
Display the data distribution.
★★★★★
vue distribution

Barplot (errorbar)

Barplot (errorbar)
Display data values.
★★★★★
vue distribution

Multiple Barplot&Line

Multiple Barplot&Line
Display data values.
★★★★★
vue distribution correlation

GO BarPlot

GO BarPlot
Display data values.
★★★★★
vue distribution

Ridge

Ridge
Display the data distribution.
★★★★★
vue distribution

Dist Plot

Dist Plot
Display the data distribution.
★★★★★
vue distribution

Density

Density
Display data distribution.
★★★★★
vue distribution

Bubble

Bubble
Display the variables.
★★★★★
vue correlation

Matrix Bubble

Matrix Bubble
Display matrix bubble.
★★★★★
vue correlation

Chord Plot

Chord Plot
Correlation Visualization.
★★★★★
vue correlation

Venn

Venn
Data sets cross-relationships.
★★★★★
vue part-of-a-whole

Eulerr Plot

Eulerr Plot
Display the data ratio.
★★★★★
vue part-of-a-whole

Variable	N	Hazard ratio	P
Surv - ph.ecog + age			
ph.ecog	227	1.56 (1.24, 1.96)	<0.001
age	227	1.01 (0.99, 1.03)	0.226
Surv - sex + age			
sex	228	0.60 (0.43, 0.83)	0.002
age	228	1.02 (1.00, 1.04)	0.065

Cox Models Forest
Used for survival data analysis.
★★★★★
vue model survival

Boxplot

Boxplot
Display differences between groups.
★★★★★
vue distribution

Parallel Coordinate

Parallel Coordinate
Display High-dimensional Data.
★★★★★
vue distribution

Stack Violin

Stack Violin
Display the data distribution.
★★★★★
vue distribution

Survival Analysis

Survival Analysis
Used for survival data display.
★★★★★
vue model survival

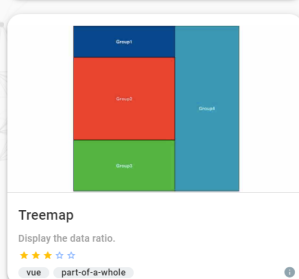
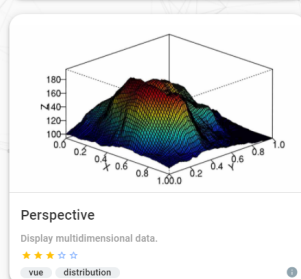
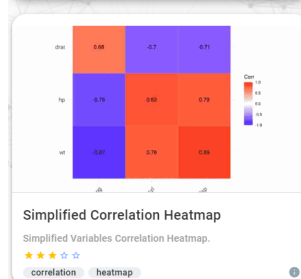
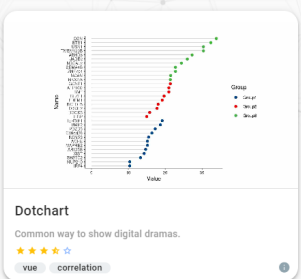
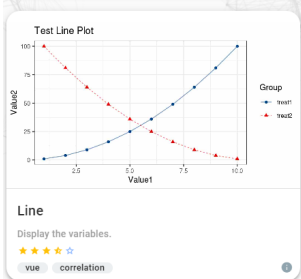
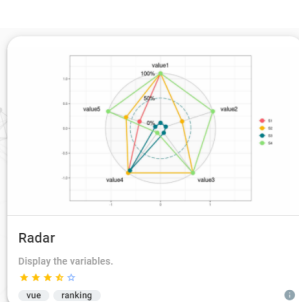
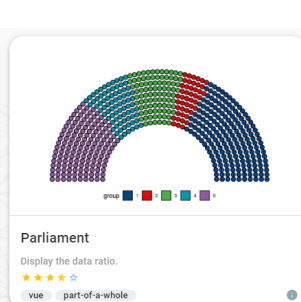
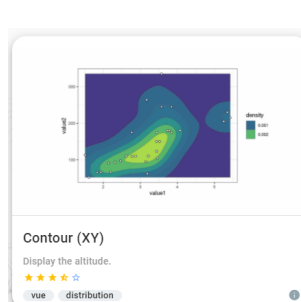
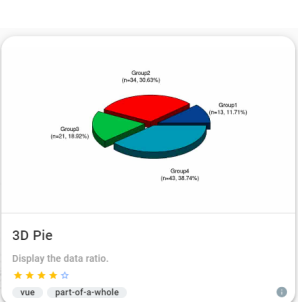
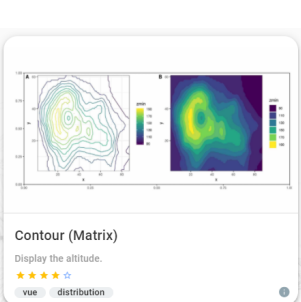
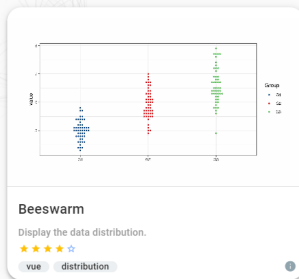
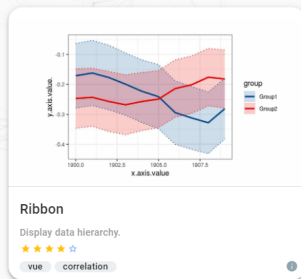
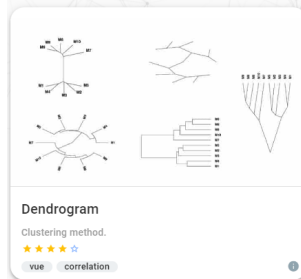
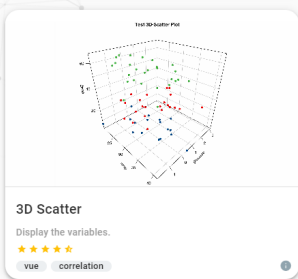
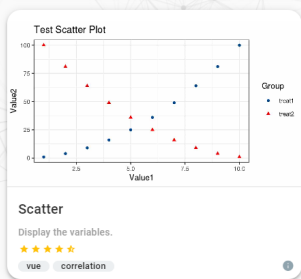
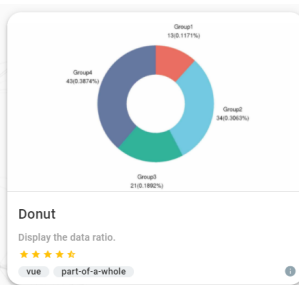
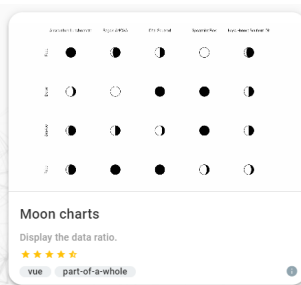
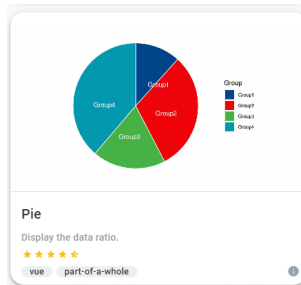
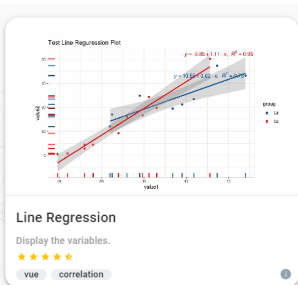
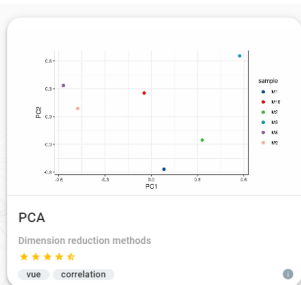
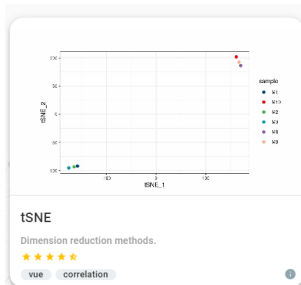
Risk Factor Analysis

Risk Factor Analysis
Survival Data Analysis.
★★★★★
vue survival model

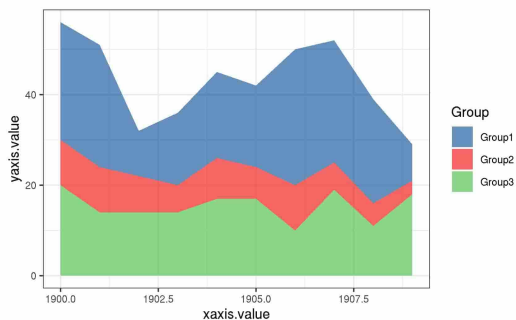
Treeheatr

Treeheatr
Decision tree visualizations.
★★★★★
vue model

Hplot 可视化平台操作演示 | 基础模块



Hiplot 可视化平台操作演示 | 基础模块



Import Data

Data Table

A screenshot of a data table interface. The table has three columns: 'group', 'xaxis.value', and 'yaxis.value'. The data is as follows:

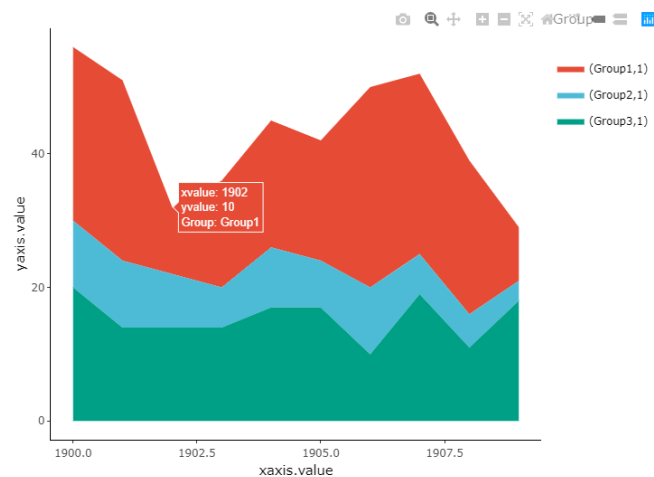
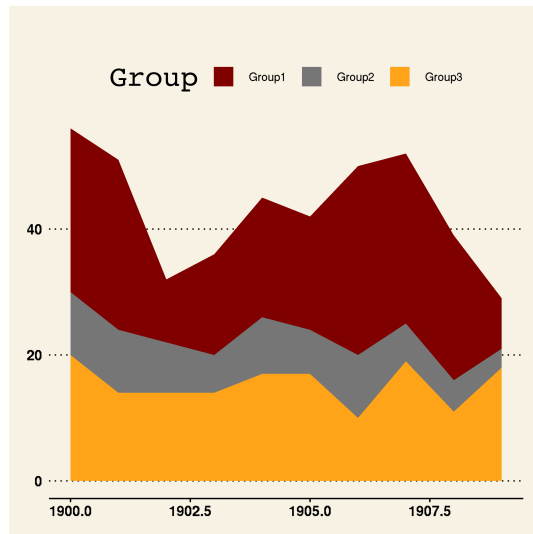
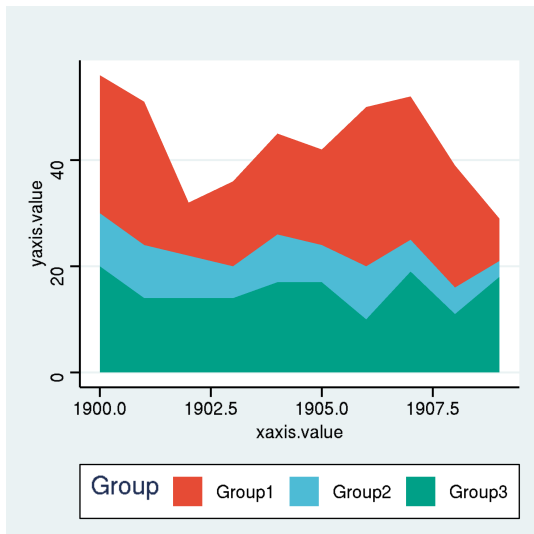
	A	B	C	D	E	F	G	H
1	group	xaxis.value	yaxis.value					
2	Group1	1900	26					
3	Group1	1901	27					
4	Group1	1902	10					
5	Group1	1903	16					
6	Group1	1904	19					
7	Group1	1905	18					
8	Group1	1906	30					
9	Group1	1907	27					
10	Group1	1908	23					
11	Group1	1909	8					
12	Group2	1900	10					
13	Group2	1901	10					
14	Group2	1902	8					
15	Group2	1903	6					
16	Group2	1904	9					
17		1905	7					



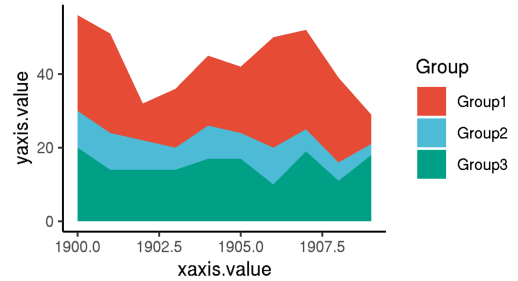
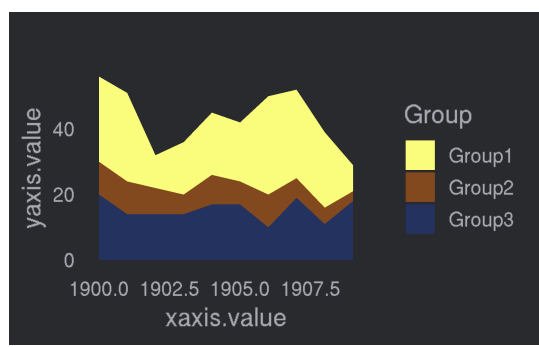
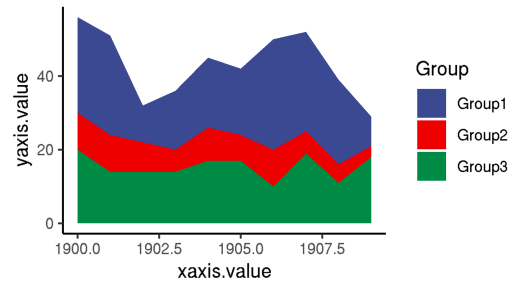
Area input and output

<https://hiplot.com.cn/basic/area>

Hiplot 可视化平台操作演示 | 基础模块

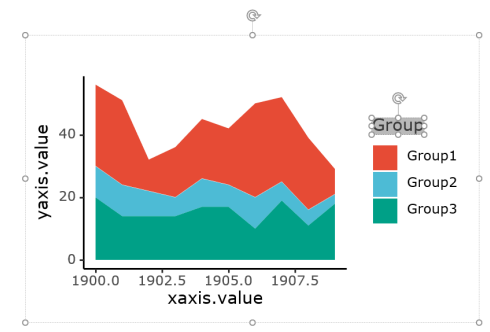


Plotly



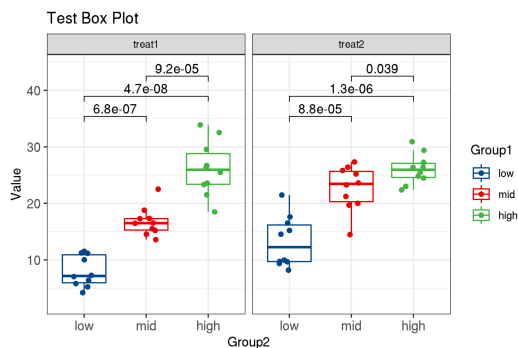
ggplot2 Theme:

Imane Export:



Area output style

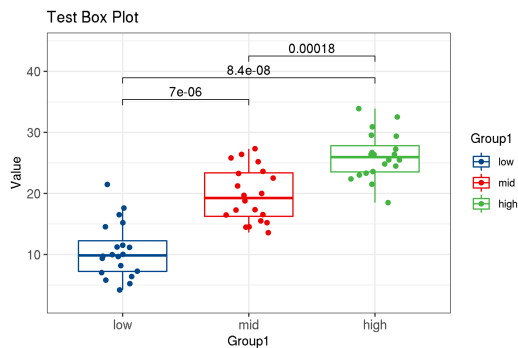
Hplot 可视化平台操作演示 | 基础模块



Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Value	Group1	Group2					
2	4.2	low	treat1					
3	11.5	low	treat1					
4	7.3	low	treat1					
5	5.8	low	treat1					
6	6.4	low	treat1					
7	10	low	treat1					
8	11.2	low	treat1					
9	11.2	low	treat1					
10	5.2	low	treat1					
11	7	low	treat1					
12	16.5	mid	treat1					
13	16.5	mid	treat1					
14	15.2	mid	treat1					
15	17.3	mid	treat1					
16	22.5	mid	treat1					
17		mid	treat1					



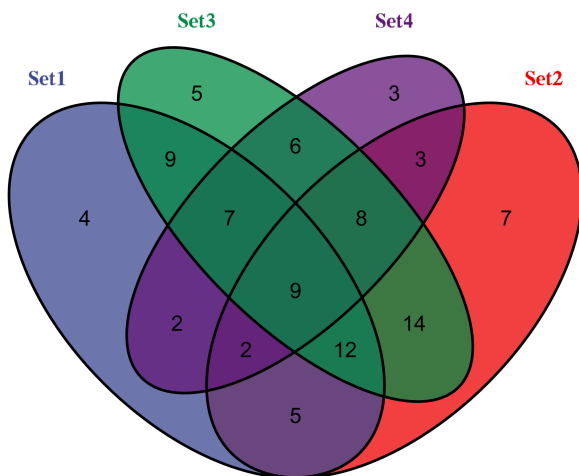
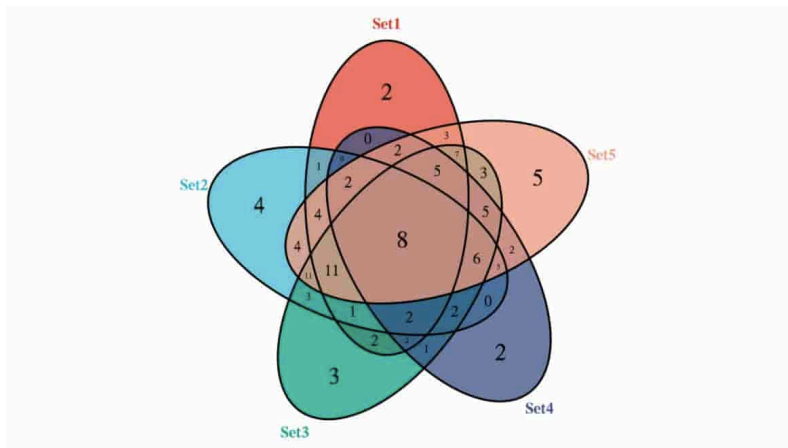
Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Value	Group1						
2	4.2	low						
3	11.5	low						
4	7.3	low						
5	5.8	low						
6	6.4	low						
7	10	low						
8	11.2	low						
9	11.2	low						
10	5.2	low						
11	7	low						
12	16.5	mid						
13	16.5	mid						
14	15.2	mid						
15	17.3	mid						
16	22.5	mid						
17		mid						



Hiplot 可视化平台操作演示 | 基础模块



Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Set1	Set2	Set3	Set4	Set5			
2	ISG15	HES5	DVL1	MATP6P1	FAM132A			
3	TTL10	AURKAIP1	ARHGEF16	MIR551A	AGRN			
4	HES4	LINC00982	OR4F16	C1orf222	WBP1LP6			
5	OR4G4P	FAM87B	SKI	MIR200B	KLHL17			
6	MND2P28	SKI	WASH7P	LINC00115	FAM41C			
7	FAM87B	GABRD	MEGF6	ATAD3B	PANK4			
8	MIR200B	OR4G11P	LINC00115	PANK4	CDK11A			
9	PLCH2	CALML6	MMP23B	MORN1	AURKAIP1			
10	MXRA8	C1orf86	ATAD3C	TPRG1L	SDF4			
11	PEX10	ATAD3B	PRDM16	B3GALT6	MND1P23			
12	TNFRSF4	HES4	OR4F29	LINC00982	FAM213B			
13	CICP27	ANKRD65	TMEM52	OR4F16	SAMD11			
14	CCDC27	OR4F5	VWA1	C1orf86	ATAD3B			
15	WBP1LP6	CCNL2	GNB1	DDX11L1	SSU72			
16	SCNN1D	TNFRSF18	FAM41C	AURKAIP1	SKI			
17								



Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Set1	Set2	Set3	Set4				
2	ISG15	HES5	DVL1	MATP6P1				
3	TTL10	AURKAIP1	ARHGEF16	MIR551A				
4	HES4	LINC00982	OR4F16	C1orf222				
5	OR4G4P	FAM87B	SKI	MIR200B				
6	MND2P28	SKI	WASH7P	LINC00115				
7	FAM87B	GABRD	MEGF6	ATAD3B				
8	MIR200B	OR4G11P	LINC00115	PANK4				
9	PLCH2	CALML6	MMP23B	MORN1				
10	MXRA8	C1orf86	ATAD3C	TPRG1L				
11	PEX10	ATAD3B	PRDM16	B3GALT6				
12	TNFRSF4	HES4	OR4F29	LINC00982				
13	CICP27	ANKRD65	TMEM52	OR4F16				
14	CCDC27	OR4F5	VWA1	C1orf86				
15	WBP1LP6	CCNL2	GNB1	DDX11L1				
16	SCNN1D	TNFRSF18	FAM41C	AURKAIP1				
17								



Venn input and output (up to 5 sets)

<https://hiplot.com.cn/basic/venn>

Hplot 可视化平台操作演示 | 基础模块

Counts

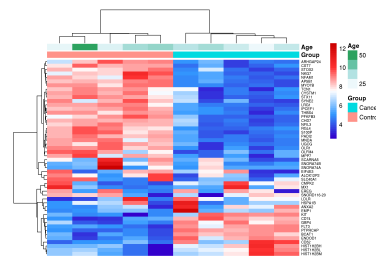
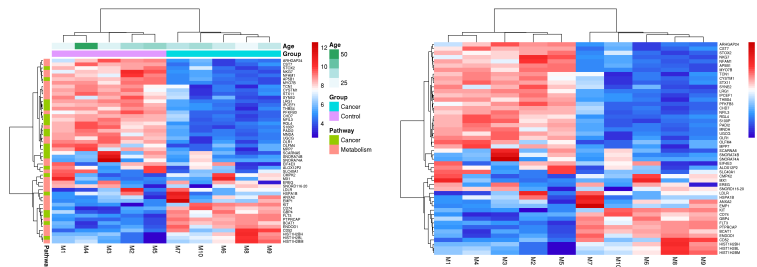
	A	B	C	D	E	F	G	H
1	Gene	M1	M2	M3	M4	M5	M6	M7
2	GBP4	6.5993441095	5.2262660248	3.6932875381	3.9385009528	4.5271930886	9.3081190324	8.98781
3	BCAT1	5.7603803773	4.8927830209	5.4489239172	3.4854133857	3.8556691717	8.6620810404	8.79331
4	CMPK2	9.5619051154	4.5491681565	3.9986549224	5.6143839805	3.9047928726	9.7907700044	7.13311
5	STOX2	8.3964093157	8.7170552201	8.0390641101	7.6430595565	9.2746490901	4.4170130073	4.72521
6	PADI2	8.4197658905	8.2684298023	8.4511808436	9.2007322844	8.5982072017	4.5900330127	5.36821
7	SCARNA5	7.6530743097	5.7803926297	10.633550472	5.9136843629	8.8056047501	5.8901204765	5.52791
8	ALOX12P2	9.0014211521	7.7535422910	4.9209595817	7.6363543709	9.8886247890	6.2119435438	3.73201
9	SNORA74B	5.5387087152	7.1690533938	11.441646436	5.9825656857	8.3944025246	4.7515592532	5.18121
10	HIST1H2BL	6.1812704966	4.4484188901	5.6049610298	6.4851683738	2.5995743866	7.6301766056	6.75821
11	MNDA	8.7026352495	7.3223519563	9.2718214201	9.1345154397	8.3391138436	4.5719022848	5.47831
12	OLF4	9.3453083049	6.4386066367	8.7167612640	9.6855451685	7.6882618432	5.9698038656	3.85631
13	FLT3	5.1643063209	4.4193554432	5.0635513633	5.4127835356	3.3378634184	8.5851643929	8.87631
14	CHD7	8.3734749638	8.7280322425	8.4088176083	8.7164755127	8.3737706673	4.6131990181	6.63621
15	NFIL3	8.0554164753	8.3650998813	9.2391936769	8.5368250774	8.4523508188	4.4785271277	6.50621
16	HSPA1B	5.0081989999	9.1946502771	6.5988499179	7.1295092512	3.8852697172	5.7121787252	11.1331
17								

GeneInfo

	A	B	C	D	E	F	G	H
1	Gene	Pathway						
2	GBP4	Cancer						
3	BCAT1	Cancer						
4	CMPK2	Cancer						
5	STOX2	Cancer						
6	PADI2	Cancer						
7	SCARNA5	Cancer						
8	ALOX12P2	Cancer						
9	SNORA74B	Cancer						
10	HIST1H2BL	Cancer						
11	MNDA	Cancer						
12	OLF4	Cancer						
13	FLT3	Cancer						
14	CHD7	Cancer						
15	NFIL3	Cancer						
16	HSPA1B	Cancer						
17								

SampleInfo

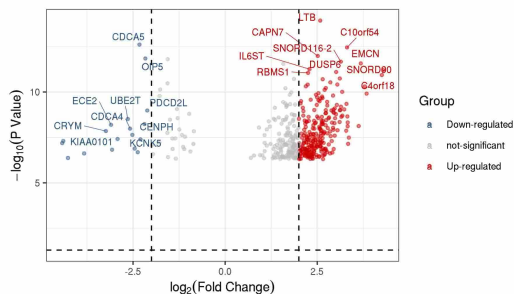
	A	B	C	D	E	F	G	H
1	Sample	Group	Age					
2	M1	Control	23					
3	M2	Control	34					
4	M3	Control	25					
5	M4	Control	52					
6	M5	Control	36					
7	M6	Cancer	28					
8	M7	Cancer	31					
9	M8	Cancer	22					
10	M9	Cancer	29					
11	M10	Cancer	34					
12								
13								
14								
15								
16								
17								



Heatmap input and output

<https://hiplot.com.cn/basic/heatmap>

Hiplot 可视化平台操作演示 | 基础模块



Import Data

Data Table

	A	B	C	D	E	F	G	H
1	Symbol	logFC	P.Value					
2	LTB	2.580830574	1.17E-14					
3	CDCA5	-2.326302376	2.46E-13					
4	C10orf54	3.307901298	3.53E-13					
5	CAPN7	2.514235402	1.04E-12					
6	OIP5	-2.16662036	1.43E-12					
7	SNORD116-2	3.139661776	2.15E-12					
8	PKIG	-1.560503944	1.58E-12					
9	EMCN	3.681695861	2.68E-12					
10	B2M	1.578095238	2.82E-12					
11	IL6ST	2.287862908	5.51E-12					
12	SNORD90	4.285534102	6.12E-12					
13	DUSP6	3.01388868	7.90E-12					
14	RBMS1	2.251183421	8.82E-12					
15	C4orf18	4.252879583	1.17E-11					
16	SKAP1	3.112284552	1.80E-11					
17	C10orf18	1.8647202	1.85E-11					



Symbol

Symbol X

P.Value

P.Value X

logFC

logFC X

Volcano input data

<https://hiplot.com.cn/basic/volcano>

Hiplot 可视化平台操作演示 | 基础模块

Show Top Genes

Show Nums 10 Selected Genes

SUBMIT

RESET

DEMO

TEMPORARY CACHE PREVIEW



Show Nums

10

Selected Genes

LTB C10orf54 CDCA5 OIP5
CAPN7

SUBMIT

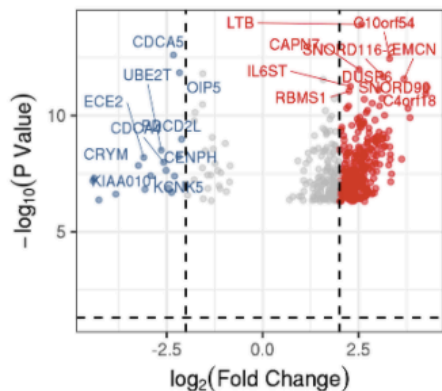
RESET

DEMO

TEMPORARY CACHE PREVIEW



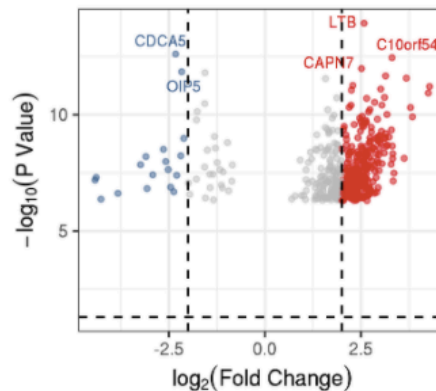
Test Volcano Plot



Group

- Down-regulated
- not-significant
- Up-regulated

Test Volcano Plot



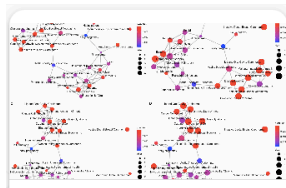
Group

- Down-regulated
- not-significant
- Up-regulated

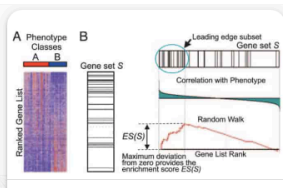
Assign the text label in volcano plot

<https://hiplot.com.cn/basic/volcano>

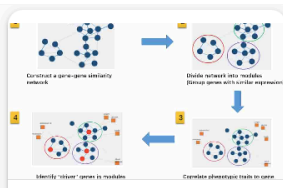
Hiplot 可视化平台操作演示 | 进阶模块



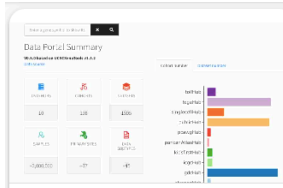
GO/KEGG Analysis
GO/KEGG analysis by clusterProfiler.
★★★★★
vue expression




Broad GSEA
Gene Set Enrichment Analysis.
★★★★★
vue expression



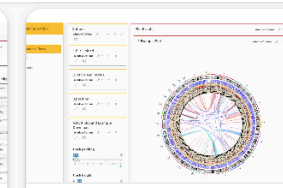
WGCNA
Co-expression network analysis.
★★★★★
vue expression



UCSCXenaShiny
UCSCXena Hub Shiny App.
shiny expression mutation TCGA



LEfSe
Metagenomic Data Analysis Application.
shiny microbiome



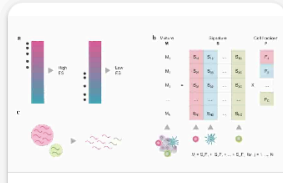
Genome Circos
Genome Circos Plot.
shiny genome circos



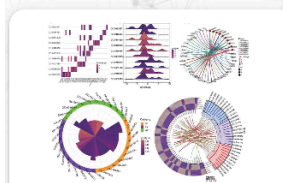
Sigflow
Mutation Signature Analysis.
vue mutation



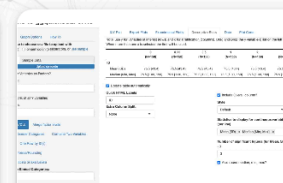
GISTIC2
Copy Number Data Analysis.
vue mutation CNV



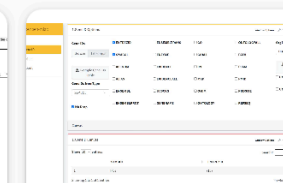
Immunedeconv
Immunoinfiltration analysis.
vue expression immune



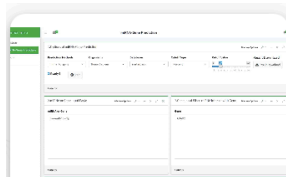
EnrichVisBox Shiny
Visualization of Enrichment Analysis
shiny enrichment GO



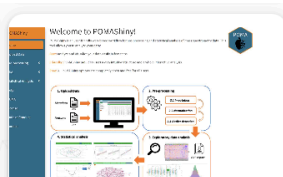
ggquickedata
Quick Exploration of Data
shiny summary exploration



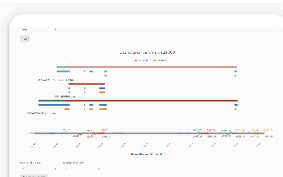
Gene ID Converter
Format Converter.
shiny gene



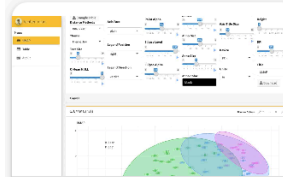
miRNA-Gene Prediction
miRNA Functional Analysis.
shiny miRNA gene



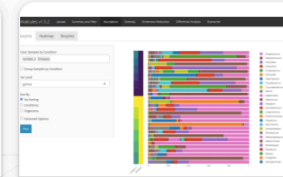
POMA Shiny
Mass Spectrometry Data Analysis.
shiny mass spectrometry



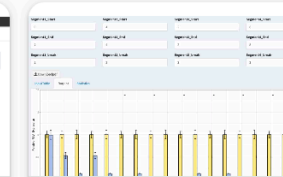
SMART
Methylation Analysis Resource Tool.
shiny methylation clinical TCGA



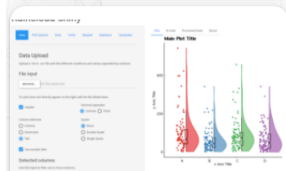
UMAP Ellipse Shiny
Interactive UMAP Visualization
shiny umap



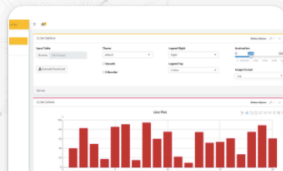
Animalcules
Interactive Microbiome Analysis
shiny microbiome




iQPCR Tools
qPCR Data Analysis Tool.
shiny qpcr



Raincloud Shiny
Interactive Raincloud Visualization
shiny raincloud




Echarts Shiny
Interactive Javascrpt Visualization
shiny echarts




t-SNE Ellipse Shiny
Interactive t-SNE Visualization
shiny t-sne



ggprapr
Interactive ggplot2 Visualization
shiny ggplot2

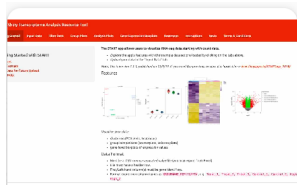


Shinyseurat
Seurat Single Cell Data Analysis
shiny single cell

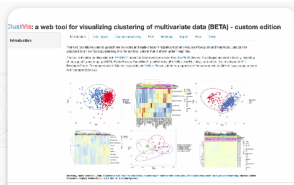


TCC-GUI
Transcriptome Analysis Tool
shiny expression

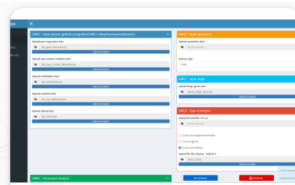
Hiplot 可视化平台操作演示 | 进阶模块



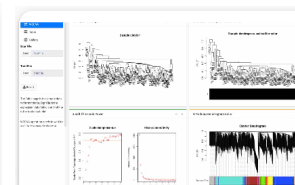
START
Transcriptome Analysis Tool
★★★★★
shiny expression



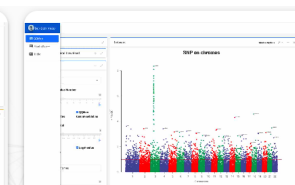
ClustVis
PCA & Cluster
★★★★★
shiny pca cluster



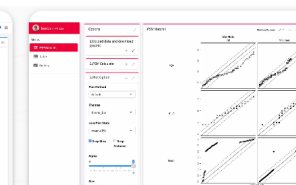
Gmiec Shiny
Integrate Multi-omics Data
★★★★★
shiny multi-omics drug



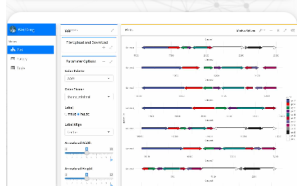
WGCNA Shiny
Co-expression network analysis.
★★★★★
shiny expression




Manhattan Shiny
Manhattan Plots.
★★★★★
shiny genome gwas




Propensity Score Matching Shiny
Propensity Score Matching (Matchit and cabaliti).
★★★★★
shiny statistics



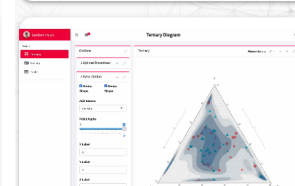
gggenes
Gene Visualization
★★★★★
shiny genome




Forestplot
Forest Visualization
★★★★★
shiny forest



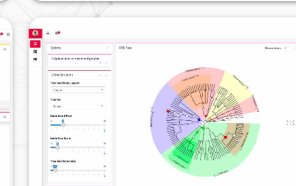
CMplot
GWAS Visualization
★★★★★
shiny genome




Ternary Diagram
Describe the Three Variables.
★★★★★
shiny ternary correlation



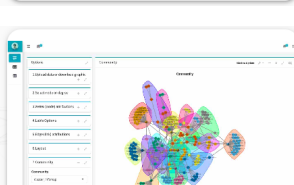
MSA Shiny
Multiple sequence alignment.
★★★★★
shiny seq



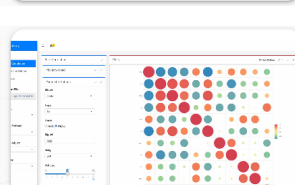
OTU-Tree Shiny
Amplicon/Metagenome OTU abundance.
★★★★★
shiny metagenome



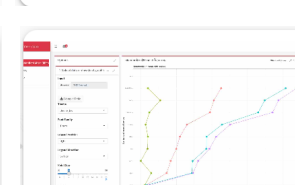
Chromosome Shiny
Chromosome Visualization.
★★★★★
shiny genome



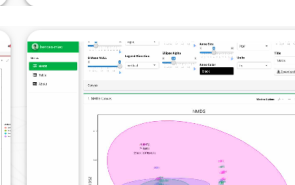
Community Shiny
Community Network Analysis.
★★★★★
shiny expression




Shiny ggcormplot2
Correlation Heatmap Shiny.
★★★★★
shiny correlation



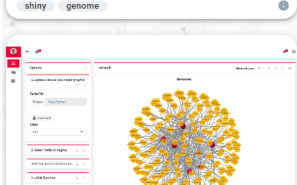
Standardized Mean Differences
Visualization of Statistical Parameters
★★★★★
shiny statistics



NMDS Ellipse
Non-metric Multidimensional Scaling Visualization
★★★★★
shiny general



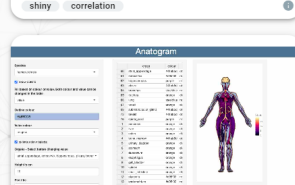
Multi Ribbon
Multi-ribbon Shiny
★★★★★
shiny general




Network Shiny
Network Plot.
★★★★★
shiny expression




Shiny CNV
Visualization of CNV
★★★★★
shiny mutation



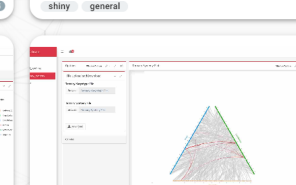
Anatogram Shiny
Anatogram.
★★★★★
shiny medicine



PCoA Ellipse Shiny
Interactive PCoA analysis.
★★★★★
shiny general

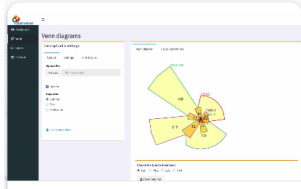


PCA Ellipse Shiny
Interactive PCA analysis.
★★★★★
shiny general

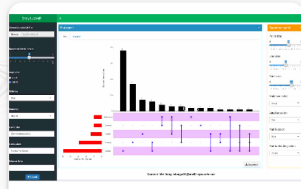


Synteny Viewer
Ternary Synteny Plot.
★★★★★
shiny general

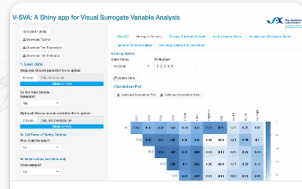
Hplot 可视化平台操作演示 | 进阶模块



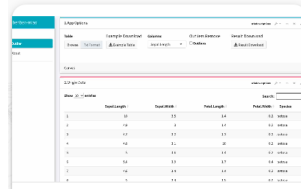
Shiny Intervene
Data sets cross-relationships.
★★★★★
shiny general



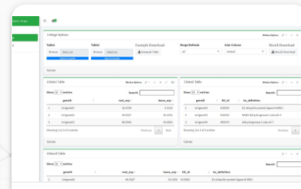
Shiny UpSetR
Data sets cross-relationships.
★★★★★
shiny general



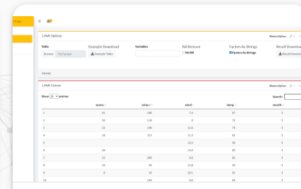
V-SVA Shiny
Visual Surrogate Variable Analysis.
★★★★★
shiny qc



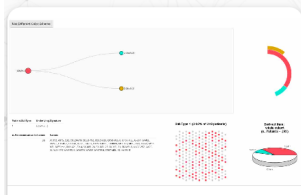
Outlier Process
Table Operation
★★★★★
shiny table



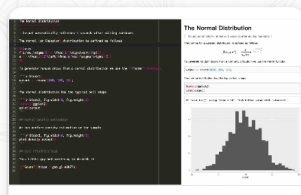
Merge Table
Table Operation
★★★★★
shiny table



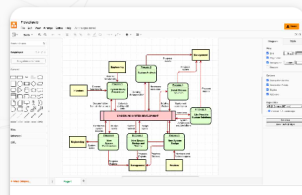
Melt Table
Table Operation
★★★★★
shiny table



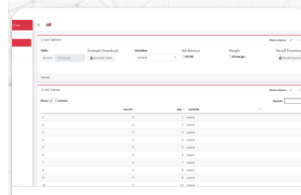
Collector Shiny
Selection of Cancer Cell Line.
★★★★★
shiny cell-line




Rmarkdown Preview
Real time preview the R markdown.
★★★★★
shiny general



Drawio Flow
Open source drawio.
★★★★★
js flow



Cast Table
Table Operation
★★★★★
shiny table



NAguideR
Table Operation
★★★★★
shiny table


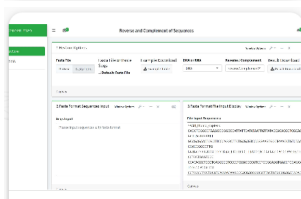
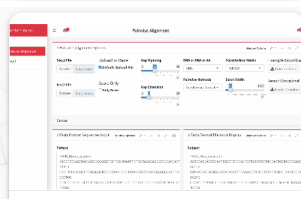


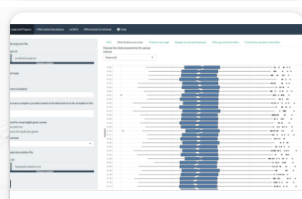
Table NA Process
Table Operation
★★★★★
shiny table



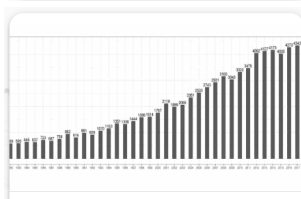
Reverse & Complement
Sequence Operation
★★★★★
shiny seq



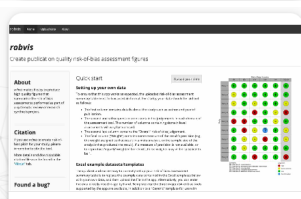
Pairwise Alignment
Sequence Operation
★★★★★
shiny seq



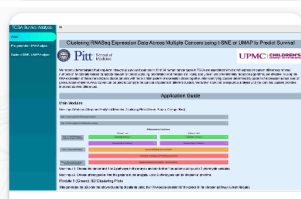
Eatomics
Proteomics Data Visualization
★★★★★
shiny protein proteomics



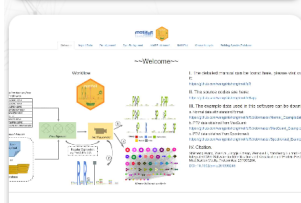
Tinyscholar
Google Scholar Author Citations
★★★★★
vue google



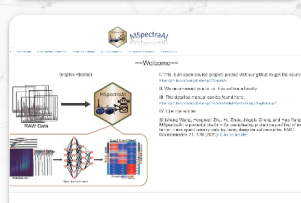
Robvis Shiny
Risk-of-bias assessment.
★★★★★
shiny qc



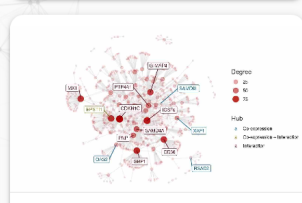
TCGA t-SNE/UMAP Survival Analysis
TCGA Survival Data Analysis.
★★★★★
shiny TCGA expression



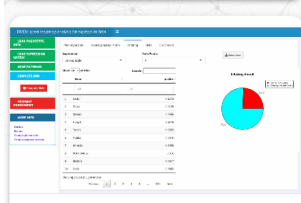
Motifer Shiny
Protein Post-Translational Modification
★★★★★
shiny protein



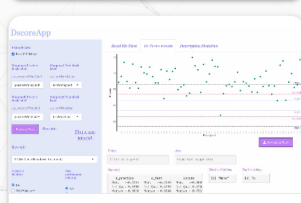
MSpectraAI Shiny
Proteomics Data Visualization
★★★★★
shiny protein



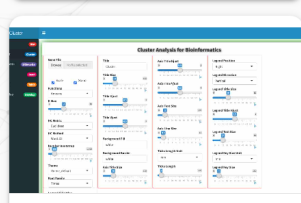
CEMitool
Co-expression modules analysis.
★★★★★
vue expression geneset



BMDx Shiny
Dose response analysis (expression).
★★★★★
shiny expression



DscoreApp
Computation of the Implicit Association Test.
★★★★★
shiny statistics



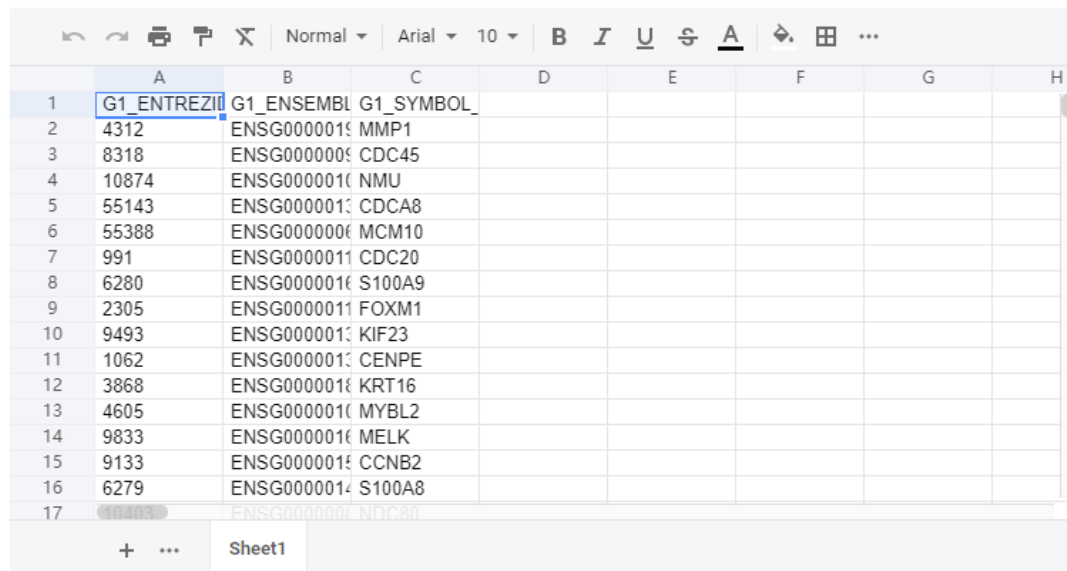
Cluster Shiny
Interactive cluster analysis.
★★★★★
shiny expression

Hiplot 可视化平台操作演示 | 进阶模块

All columns will be included in the analysis


Import Data 


Data Table



	A	B	C	D	E	F	G	H
1	G1_ENTREZID	G1_ENSEMBL	G1_SYMBOL					
2	4312	ENSG0000010	MMP1					
3	8318	ENSG0000000	CDC45					
4	10874	ENSG0000010	NMU					
5	55143	ENSG0000010	CDC48					
6	55388	ENSG0000000	MCM10					
7	991	ENSG0000011	CDC20					
8	6280	ENSG0000010	S100A9					
9	2305	ENSG0000011	FOXM1					
10	9493	ENSG0000010	KIF23					
11	1062	ENSG0000010	CENPE					
12	3868	ENSG0000010	KRT16					
13	4605	ENSG0000010	MYBL2					
14	9833	ENSG0000010	MELK					
15	9133	ENSG0000010	CCNB2					
16	6279	ENSG0000010	S100A8					
17	10403	ENSG0000000	NDC80					



KEGG DB
public/db/kegg/hsa_kegg_20200822.rds    

Org DB
org.Hs.eg.db 

Extra Parameters

Mode: BP MF CC KEGG ▼ P Adjust Method: BH ▼

Min Gene Size: 10 10 Max Gene Size: 500 500

P Cutoff: 0.01 0.01 Q Cutoff: 0.05 0.05

Show Number of Items: 7 7

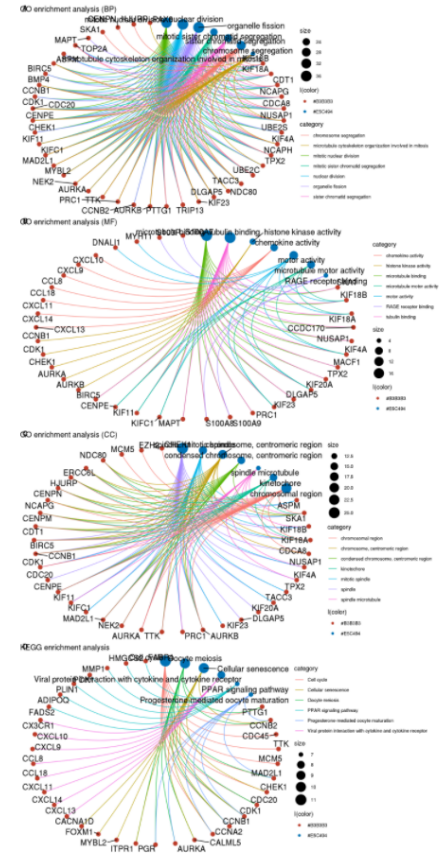
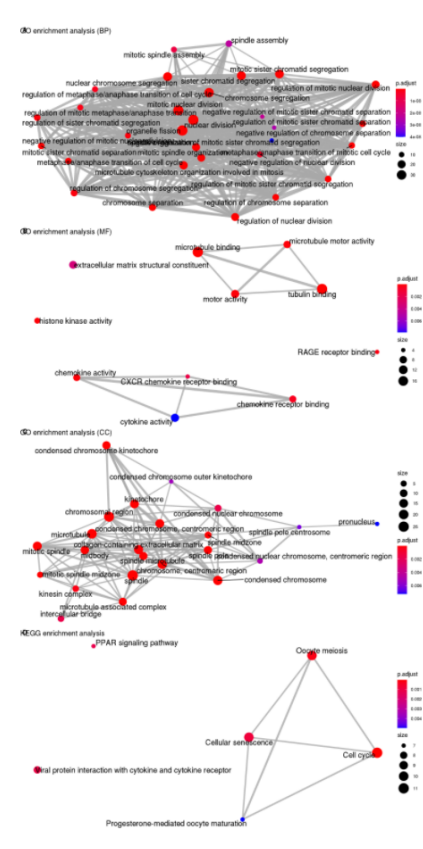
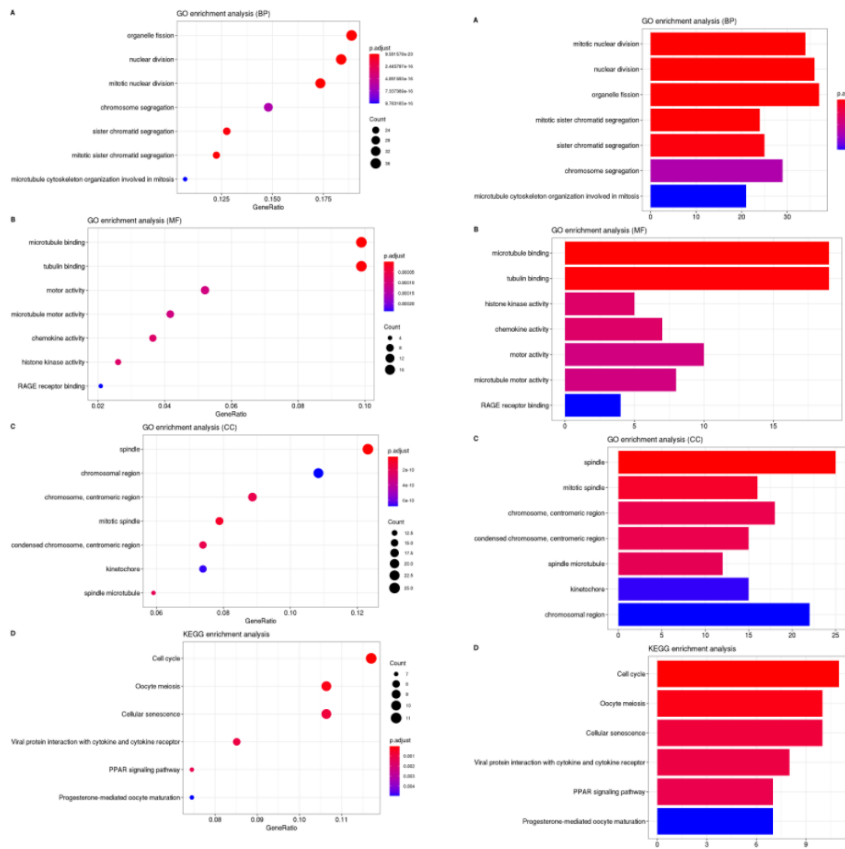
Use DOSE Background List Draw Barplot Draw Enrichment Map

Draw Gene-Concept Network

GO/KEGG Analysis Input

<https://hiplot.com.cn/advance/clusterprofiler-go-kegg>

Hplot 可视化平台操作演示 | 进阶模块



GO/KEGG Analysis Output

<https://hiplot.com.cn/advance/clusterprofiler-go-kegg>



Hiplot 可视化平台操作演示 | 进阶模块

public/demo/gsea/P53.txt

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	NAME	DESCRIPTION	786-0	BT-549	CCRF-CEM	COLO 205	EKVX	HCC-2998	HCT-15	HOP-62	HOP-92	HS 578T	HT29	K-562	KM12	M14	MDA-MB-231A	MDA-MB-435	NCI-H
2	TACC2	na	46.05	82.17	16.87	96.6	141.02	114.32	134.34	44.95	73.96	74.29	130.04	24.04	197.63	33.62	72.22	53.70	64.19
3	C14orf132	na	108.34	59.04	25.61	33.11	42.53	9.12	9.36	310.96	101.74	241.05	15.52	19.46	5.05	32.39	18.11	18.4	122.9
4	AGER	na	42.2	25.75	76.01	40.41	32.17	48.28	58.27	42.4	49.68	58.18	59.93	36.98	45.58	32.58	48.13	45.04	47.23
5	32385_at	na	7.43	13.94	8.55	21.13	15.09	19.05	16.47	7.6	10.88	9.36	14.91	14.37	15.96	13.75	6.21	11.21	23.3
6	RBM17	na	11.4	3.0	3.16	2.34	4.43	1.56	6.04	6.16	1.41	7.1	2.05	2.85	1.43	4.92	5.45	2.6	3.05
7	DY11	na	148.09	317.17	318.66	147.23	125.78	261.39	268.41	212.51	142.51	163.06	252.58	183.74	174.92	156.65	241.41	177.62	145.9
8	CCOR1A	na	6.62	9.12	1572.53	5.91	5.31	11.98	128.77	7.51	7.04	6.01	5.67	15.35	8.05	6.29	6.22	7.94	9.81
9	WT1	na	206.74	136.71	141.34	129.09	138.01	138.16	130.14	133.8	131.91	142.58	94.59	148.7	127.9	115.71	113.4	157.55	140.1
10	SYCP2	na	7.94	35.69	7.0	1.97	7.75	4.73	7.23	5.72	2.82	1.16	25.92	15.13	4.79	17.41	9.4	3.68	20.35
11	SULF1	na	10.45	8.5	4.05	4.77	2.35	3.72	3.34	809.88	2.58	1211.69	2.77	5.62	4.85	4.93	6.06	4.06	
12	C19orf21	na	6.23	5.16	3.95	37.55	110.36	208.29	251.67	4.43	3.24	4.87	126.02	4.73	171.15	3.88	4.17	3.65	4.05
13	PHVH	na	309.99	253.07	90.36	61.83	360.49	145.01	130.16	165.5	343.02	121.41	125.69	68.44	252.22	236.32	147.41	159.43	193.8
14	31335_at	na	3.35	5.28	2.98	4.82	4.36	1.45	5.57	4.38	3.57	4.43	1.62	3.23	6.47	8.43	6.78	5.15	4.71
15	TOP2B	na	349.1	482.16	1348.41	274.07	730.39	350.95	635.21	644.7	516.55	553.51	258.29	600.56	604.43	540.68	462.45	288.08	494.4
16	ATP9A	na	126.28	197.49	117.66	380.3	354.14	84.19	243.24	235.76	252.57	219.15	1130.06	4.92	191.27	105.05	50.89	71.97	285.6
17	TGFBR1	na	11.73	13.13	16.2	12.97	9.55	8.3	20.25	17.05	19.68	18.75	13.34	16.27	9.35	25.7	9.79	16.0	14.65
18	IRF7	na	58.46	246.49	52.48	70.54	33.35	198.34	155.66	144.43	56.44	17.4	967.34	42.65	54.76	111.66	74.16	44.61	55.72
19	2NF189	na	24.28	56.32	45.09	44.11	36.9	37.76	65.64	36.62	24.88	30.68	38.62	25.76	47.39	33.97	34.34	32.48	43.85
20	VTI1B	na	184.52	85.33	123.2	128.74	167.21	135.93	165.11	182.51	245.75	88.73	116.11	121.28	112.04	82.78	131.74	94.24	185.5
21	32413_at	na	32.17	23.72	14.51	14.68	22.96	18.22	6.37	19.93	8.14	16.0	11.38	12.38	16.73	22.59	18.53	14.54	19.81
22	RPS6KB1	na	74.05	33.55	52.15	50.15	81.86	96.03	86.38	90.16	69.21	34.65	45.23	46.43	66.0	46.23	61.02	41.25	111.01
23	KCNB1	na	5.55	13.95	7.29	4.92	12.74	8.6	3.66	4.17	36.61	7.02	7.31	6.2	5.81	6.12	6.14	4.59	111.21
24	RAPGEF4	na	7.44	4.51	4.38	4.38	2.75	4.87	3.62	3.27	1.09	1.67	4.03	0.88	5.65	6.01	7.86	5.03	3.16
25	ALDH9A1	na	168.62	224.42	318.53	291.52	250.23	266.74	535.4	314.31	227.49	315.75	155.98	215.25	524.49	430.31	355.17	456.22	263.1
26	39520_at	na	86.48	76.1	52.11	63.33	77.98	74.89	73.68	102.35	78.91	84.45	70.91	47.47	67.45	61.88	77.16	76.17	70.43
27	TGM1	na	20.18	12.0	13.36	6.64	10.52	6.57	11.5	9.83	6.35	12.43	12.12	15.81	9.04	8.37	13.84	13.38	17.02
28	DDX18	na	82.2	69.63	186.94	109.83	114.81	127.14	103.26	99.43	134.82	95.5	102.81	152.11	146.47	130.47	79.95	186.04	147.8
29	HSU79275	na	84.33	66.8	93.74	113.44	133.74	114.09	95.67	98.26	113.66	54.4	74.25	70.87	72.26	109.16	83.56	87.95	100.9
30	OR2F2	na	23.91	26.29	17.09	14.98	14.09	17.71	16.09	15.77	15.36	22.5	13.68	14.46	15.94	19.33	19.34	39.29	17.7
31	BDP6403	na	17.67	76.64	183.88	66.68	65.62	75.46	64.97	104.82	43.16	63.64	61.3	74.11	113.46	63.04	46.67	63.76	66.64

50 2 1

#MUT WT

MUT
WT WT

KEGG_GLYCOLYSIS_GLUconeogenesis http://www.gsea-msigdb.org/gsea/msigdb/cards/KEGG_GLYCOLYSIS_GLUconeogenesis ACSS2 GCK PGK2 PGK1 PDHB PDHA1 PDHA2 PGM2 TP1 ACSS1 FBP1 ADH1B HK2 ADH1C HK1 HK3 ADH4 PGAM2 ADH5 PGAM1 ADH1A ALDOC ALDH7A1 LDHAL6B PKLR LDHAL6A ENO1 PKM PFKP BPGM PCK2 PCK1 ALDH1B1 ALDH2 ALDH3A1 AKR1A1 FBP2 PFKM PFKL LDHC GAPDH ENO3 ENO2 PGAM4 ADH7 ADH6 LDHB ALDH1A3 ALDH3B1 ALDH3B2 ALDH9A1 ALDH3A2 GALM ALDOA DLD DLAT ALDOB G6PC2 LDHA G6PC PGM1 GPI

KEGG_CITRATE_CYCLE_TCA_CYCLE http://www.gsea-msigdb.org/gsea/msigdb/cards/KEGG_CITRATE_CYCLE_TCA_CYCLE IDH3B DLST PCK2 CS PDHB PCK1 PDHA1 PDHA2 SUCLG2P2 FH SDHD OGDH SDHB IDH3A SDHC IDH2 IDH1 ACO1 ACLY MDH2 DLD MDH1 DLAT OGDHL PC SDHA SUCLG1 SUCLA2 SUCLG2 IDH3G ACO2

GSEA analysis input
<https://hiplot.com.cn/advance/gsea>



Hplot 可视化平台操作演示 | 进阶模块

GO/KEGG ANALYSIS **BROAD GSEA** WGCNA SIGFLOW GISTIC2 CEMITool IMMUNECONV FUSION

Meta Info

APP Name: Broad GSEA

Plugin Version: v0.1.0

One Sentence Introduction: Gene Set Enrichment Analysis.

Maintainer: Aravind Subramanian & Hplot Team | Jianfeng

Citation: Subramanian A, Tamayo P, Mootha V K, et al. Gene set enrichment analysis: a knowledge-based approach for interpreting genome-wide expression profiles[J]. Proceedings of the National Academy of Sciences, 2005, 102(43): 15545-15550.

Plugin Release Date: 2020-10-29

Last Update Date: 2020-10-29

Import Data

Data Table: public/demo/gsea/PS3.txt

Sample Groups: public/demo/gsea/PS3.cls

Pathways File: public/db/msigdb/v7.2/c2.cp.kegg.v7.2.symbols.gmt

You can choose multiple gene sets

MUT_vs_WT....5280926641

- butterfly_plot.png
- edb
- enplot_KEGG...TION_48.png
- enplot_KEGG...SE_105.png
- enplot_KEGG...NCE_15.png
- enplot_KEGG...WAY_45.png
- enplot_KEGG...ORS_24.png**
- enplot_KEGG..._24.png alias
- enplot_KEGG...CER_57.png
- enplot_KEGG...WAY_63.png
- enplot_KEGG...AMS_75.png
- enplot_KEGG...YCLE_54.png
- enplot_KEGG...TION_87.png
- enplot_KEGG...CER_21.png
- enplot_KEGG...LISM_93.png
- enplot_KEGG...ION_117.png
- enplot_KEGG...ION_120.png
- enplot_KEGG...LISM_99.png
- enplot_KEGG...NG_111.png
- enplot_KEGG...HESIS_3.png
- enplot_KEGG...TION_78.png
- enplot_KEGG...WAY_33.png
- enplot_KEGG...PAIR_27.png
- enplot_KEGG...TION_66.png
- enplot_KEGG...OSIS_30.png
- enplot_KEGG...WAY_69.png

enplot_KEGG_BASAL_TRANS
CRIPTION_FACTORS_24.png
PNG image - 31 KB

Tags Add Tags...

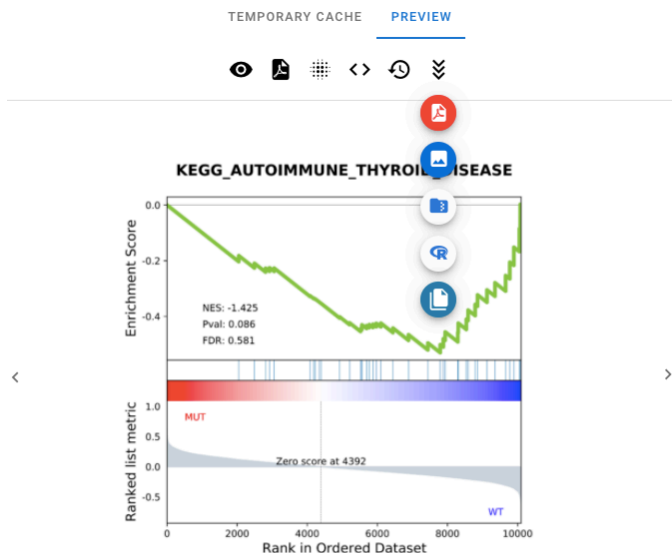
Created Yesterday, 11:22 PM

Modified Yesterday, 11:22 PM

Content created 2020/11/13

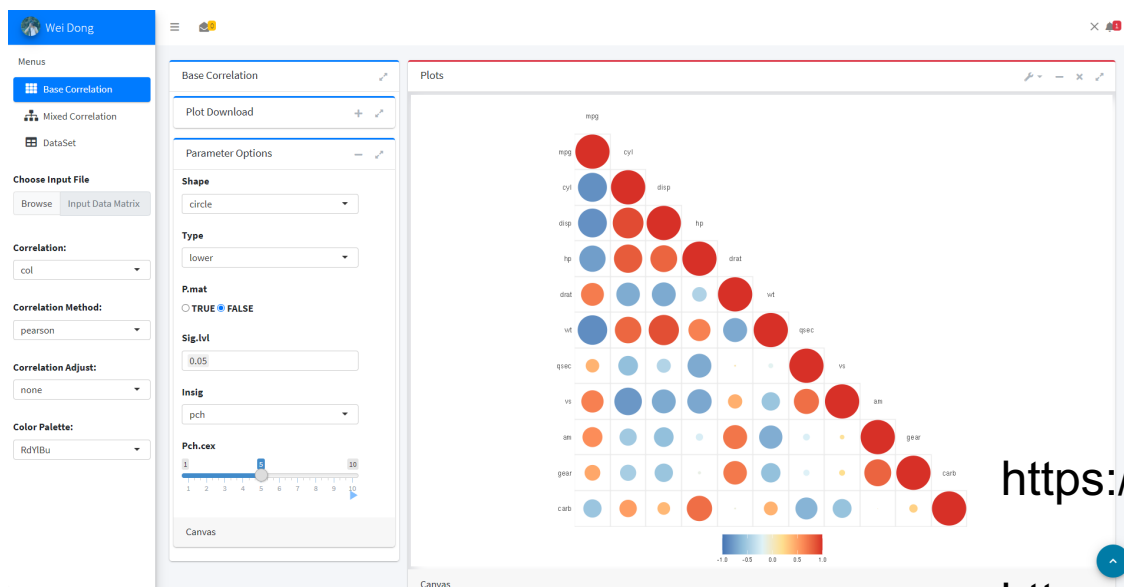
Dimensions 500x500

Color space RGB



GSEA analysis output
<https://hplot.com.cn/advance/gsea>

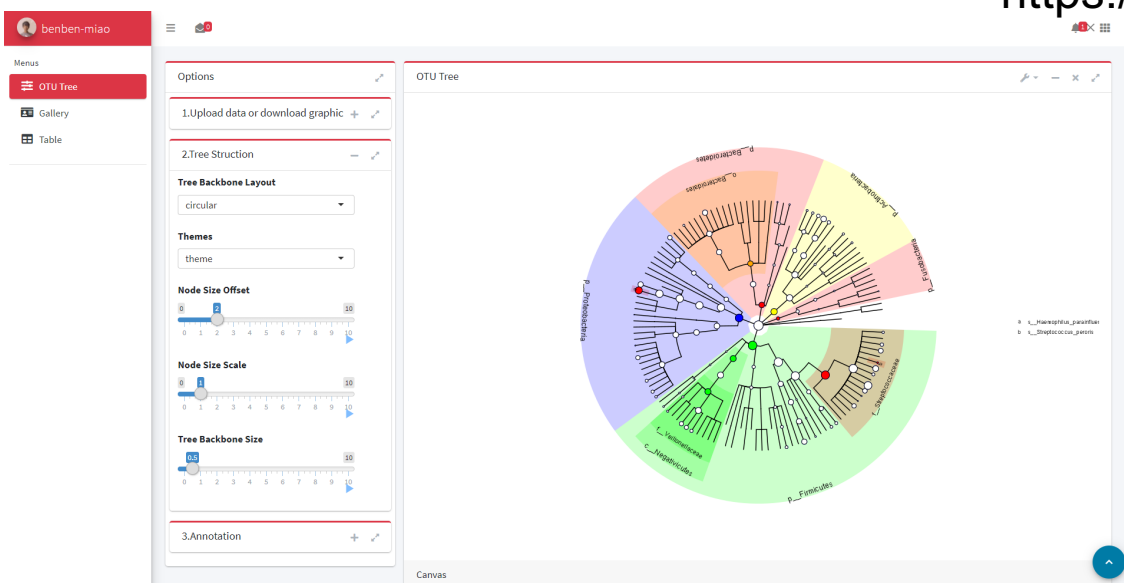
Hiplot 可视化平台操作演示 | 进阶模块



	mpg	cyl	disp	hp	drat
Mazda RX4	21	6	160	110	3.9
Mazda RX4 Wag	21	6	160	110	3.9
Datsun 710	22.8	4	108	93	3.85
Hornet 4 Drive	21.4	6	258	110	3.08
Hornet Sportabout	18.7	8	360	175	3.15
Valiant	18.1	6	225	105	2.76
Duster 360	14.3	8	360	245	3.21
Merc 240D	24.4	4	146.7	62	3.69
Merc 230	22.8	4	140.8	95	3.92
Merc 280	19.2	6	167.6	123	3.92

<https://hiplot.com.cn/advance/ggcorrplot2>

<https://hiplot.com.cn/advance/otu-tree>



1. OTU Table

Show 10 entries

ID	BM_SR5013506	BM_SR5013574	BM_SR5015646	BM_54
1 k__Bacteria	100	100	100	
2 k__Bacteriopl__Actinobacteria	1.33909	2.90435	0.45117	
3 k__Bacteriopl__Actinobacteri__Actinobacteria	1.23809	2.90435	0.45117	
4 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales	1.33215	2.90435	0.44821	
5 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Actinomycetales	0.11797	0.56928	0.01312	
6 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Actinomycetales__Actinomycetes	0.11797	0.56928	0.01312	
7 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Actinomycetales__Actinomycetes__odontolyticus	0.0161	0.00063	0.00078	
8 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Actinomycetales__Actinomycetes__Actinomycetes__oris	0.04402	0.21493	0.00029	
9 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Actinomycetales__Actinomycetes__viscosus	0.05785	0.35372	0.00305	
10 k__Bacteriopl__Actinobacteri__Actinobacteri__Actinomycetales__Corynebacteriales	0.00702	0.08809	0.00343	

Showing 1 to 10 of 285 entries

2. Node Table

Show 10 entries

node	color
1 s__Haemophilus_paraifluoraze	red
2 p__Proteobacteria	blue
3 f__Verrucomicrobiales	green
4 s__Streptococcus_pemisi	red
5 c__Negativicutes	green

Interactive Shiny
Applications



Hiplot 可视化平台操作演示 | 进阶模块

DimPlot
VlnPlot
RidgePlot
DotPlot
FeaturePlot
HeatmapPlot
DataSet

Choose Seurat Object RDS File

Browse Input RDS File

Reduction Method:
UMAP

Active Assay:
RNA

Color Palette
NPG

Input Genes
CD4
SELL
CCR7

Plot Download

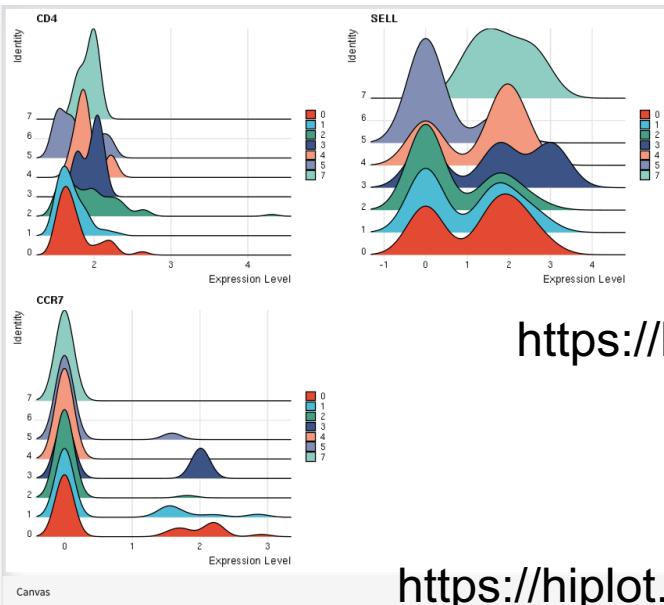
Image Format
PDF

Download

Parameter Options

Group By
seurat_clusters

Canvas



Input RDS object of Seurat

<https://hiplot.com.cn/advance/shinyseurat>

<https://hiplot.com.cn/advance/community-shiny>

Menus

Community

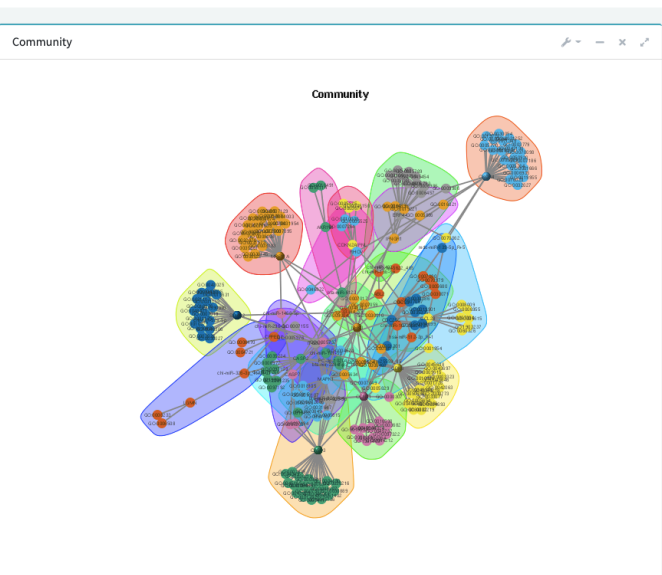
Gallery

Table

Options

- 1.Upload data or download graphic
- 2.Select node or degree
- 3.Vertex (node) attributions
- 4.Lable Options
- 5.Edge (link) attributions
- 6.Layout
- 7.Community

Community
cluster_infomap



Show 10 entries

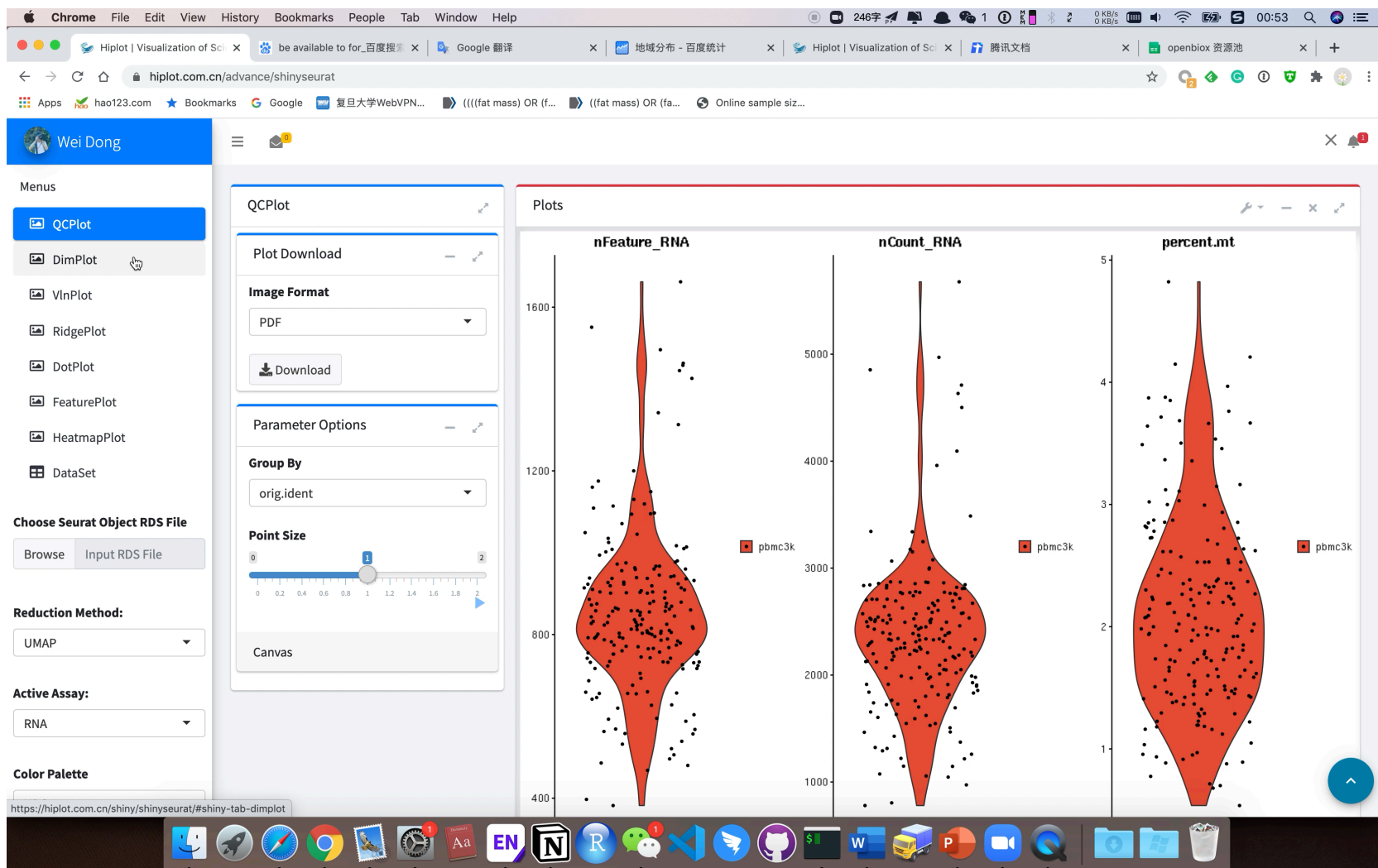
	node1	node2
1	ABL2	PC-3p-5622_465
2	ABL2	PC-5p-33384_55
3	ABL2	chi-miR-107-3p
4	ABL2	chi-miR-15b-5p
5	CASP2	PC-3p-10204_250
6	CASP2	bta-miR-6123
7	CASP2	bta-mir-2284f-p3_1ss6CA
8	CASP2	chi-miR-326-3p_1ss21CT
9	CASP2	PC-5p-33384_55
10	CASP3	bta-miR-30d_R-4

Showing 1 to 10 of 284 entries

Interactive Shiny
Applications

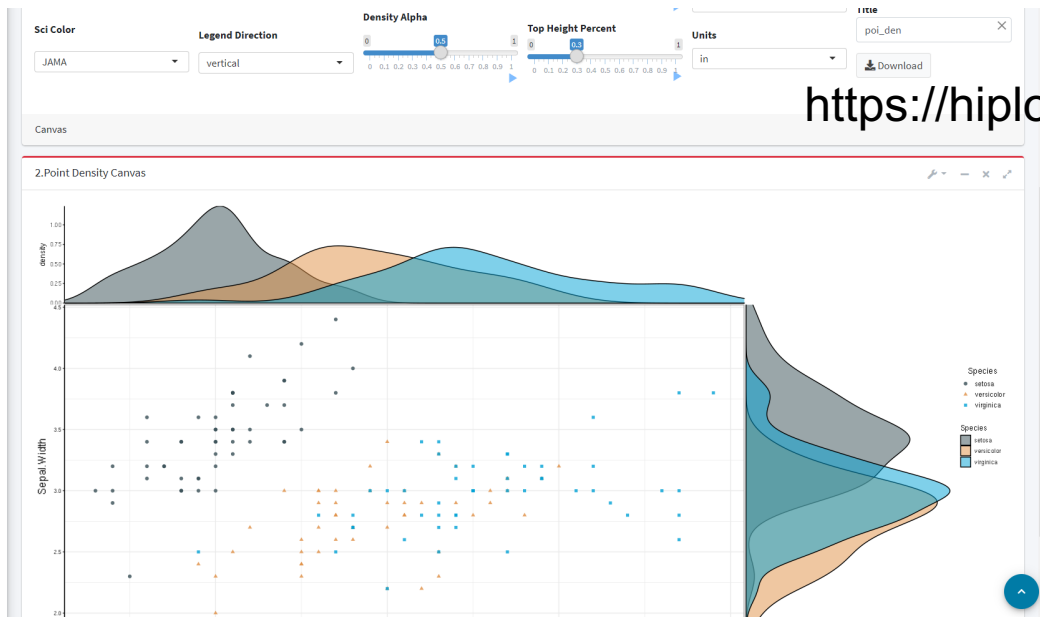


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Shinyseurat Application

Hiplot 可视化平台操作演示 | 进阶模块

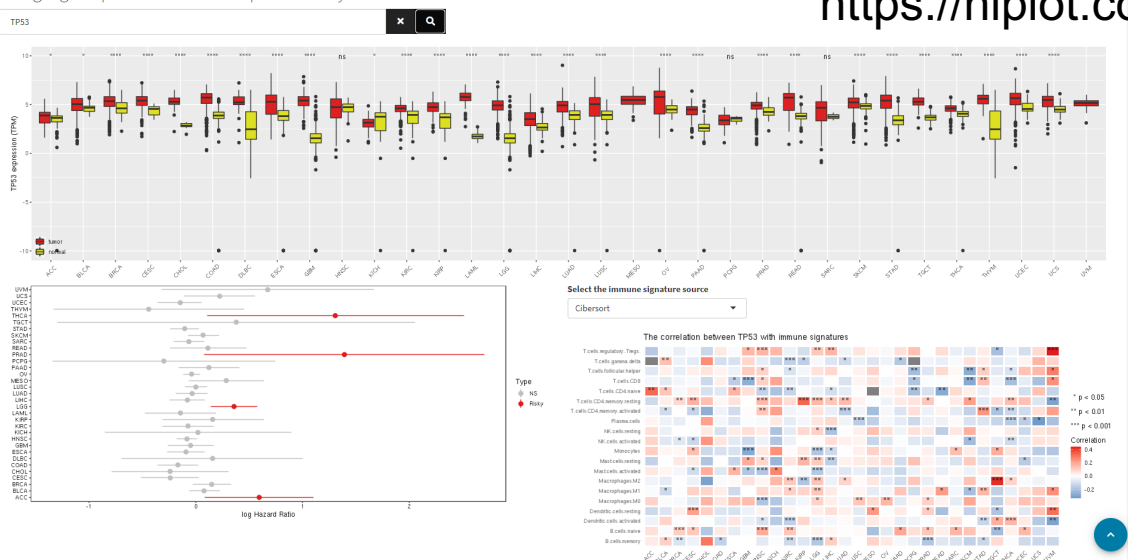


<https://hiplot.com.cn/advance/point-density>

Sepal.Length	Sepal.Width	Species
5.1	3.5	setosa
4.9	3	setosa
4.7	3.2	setosa
4.6	3.1	setosa
5	3.6	setosa
5.4	3.9	setosa
4.6	3.4	setosa
5	3.4	setosa
4.4	2.9	setosa
..

Single gene pan-cancer transcriptome analysis

<https://hiplot.com.cn/advance/ucsc-xena-shiny>



Interactive Shiny
 Applications



Hiplot 可视化平台操作演示 | 小工具箱

Import Data 

Image Files



/public/demo/pdf-collage/bubble.pdf

/public/demo/pdf-collage/go-bar.pdf



/public/demo/pdf-collage/barplot.pdf

/public/demo/pdf-collage/diverging-scale.pdf



Preview PDF-Collage input files

<https://hiplot.com.cn/mini-tools/pdf-collage>

Hiplot 可视化平台操作演示 | 小工具箱

Import Data



Set Parameters

General Parameters

Task Name: 9a3c27c0-257f-11eb-be8c-9f0dc625fb96

Image Export: png pdf

Extra Parameters

Mode: combine-grid

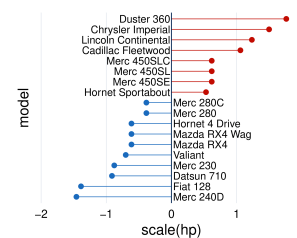
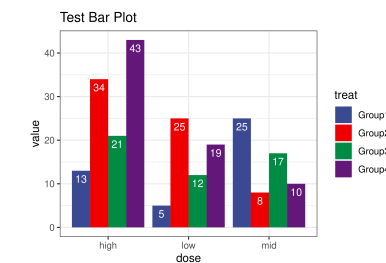
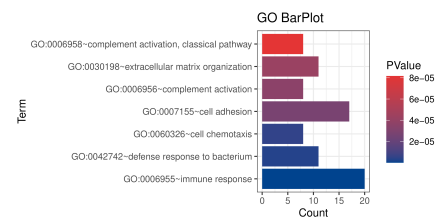
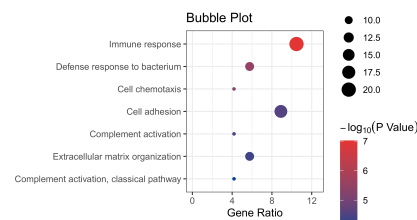
Page Size: custom

Figures Per Page: 4

Dimensions Width (cm): 29.7

Dimensions Height (cm): 21

SUBMIT RESET DEMO



Merge Images (Grid Mode)

<https://hiplot.com.cn/mini-tools/pdf-collage>

Hiplot 可视化平台操作演示 | 小工具箱

Import Data

Image Files

- /public/demo/pdf-collage/bubble.pdf
- /public/demo/pdf-collage/go-bar.pdf
- /public/demo/pdf-collage/barplot.pdf
- /public/demo/pdf-collage/diverging-scale.pdf

Set Parameters

General Parameters

Task Name: 9a3c27c0-257f-11eb-be8c-9f0dc625fb96

Image Export: png pdf

Extra Parameters

Mode: combine-arrange

Page Size: custom

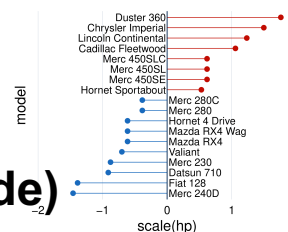
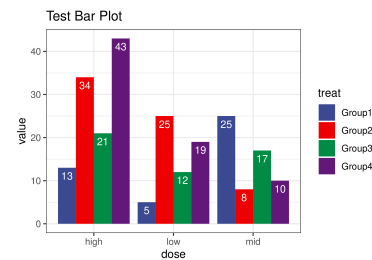
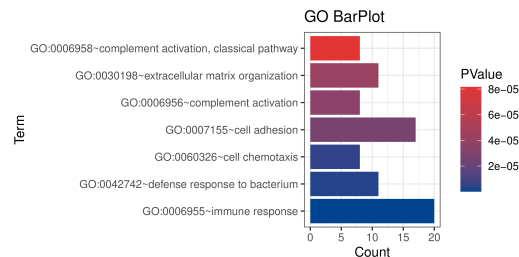
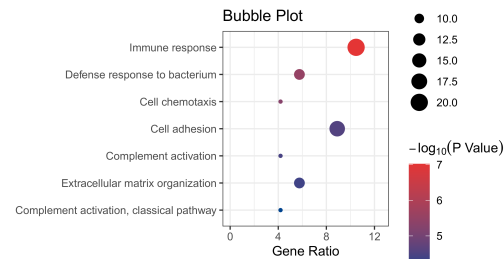
Nrow: 4

Ncol: 1

Dimensions Width (cm): 29.7

Dimensions Height (cm): 21

SUBMIT RESET DEMO



Merge Images (Arrange Mode)

<https://hiplot.com.cn/mini-tools/pdf-collage>

Hiplot 可视化平台操作演示 | 小工具箱

Import Data

Files ✕ 🗨 👁 📄 ⬇

Set Parameters

General Parameters

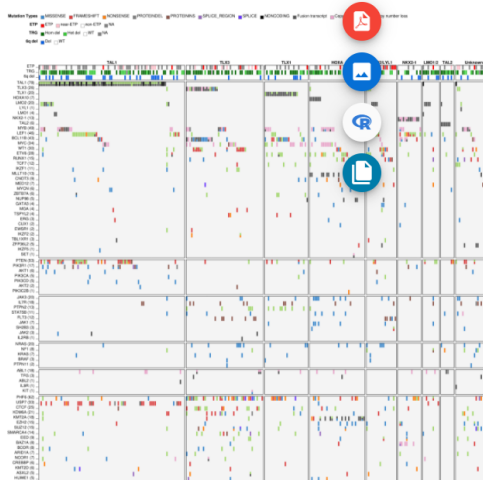
Task Name

Image Export png pdf ▼

36 / 80

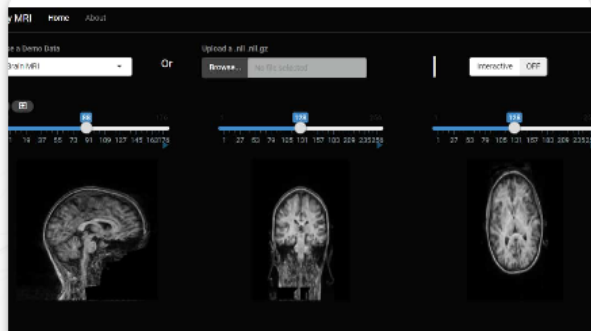
SUBMIT RESET DEMO 🕒 📄 🔗

TEMPORARY CACHE PREVIEW



<https://hiplot.com.cn/mini-tools/svg-convertor>

Hiplot 可视化平台操作演示 | 临床工具



ShinyMRI

Visualize 3D/4D Medical Imaging Data.



shiny clinical mri



The CHA2DS2-VASc score

Estimating the risk of stroke in patients.



shiny clinical



late Body Mass Index (BMI)

calculates the BMI by using fomular:

$$\frac{\text{mass}_{\text{kg}}}{\text{height}_{\text{m}}^2} = \frac{\text{mass}_{\text{lb}}}{\text{height}_{\text{in}}^2} \times 703$$

body weight (kg)

body height (cm)

According to your input, the BMI is:

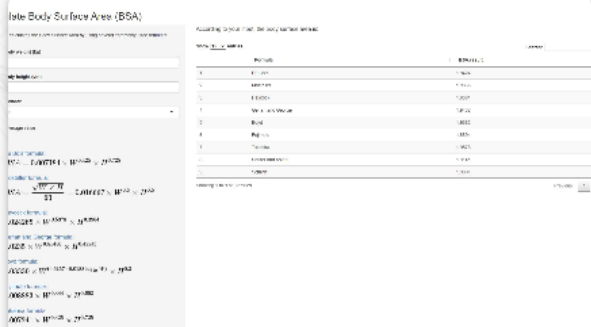
23.1481 kg/m²

Body Mass Index (BMI)

Clinical Calculations Project.



shiny clinical

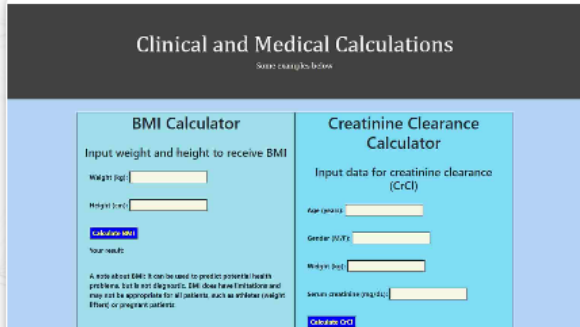


Body Surface Area (BSA)

Clinical Calculations Project.



shiny clinical



BMI & CrCl

Clinical Calculations Project.



clinical



HCCP Scoring Tool	Points applicable	Points scored
Respiratory - use highest score (max 4)		
Frequent or increasing lower respiratory infections	1	
PICU admission for lower respiratory infection	2	
Requirement for long term oxygen or non-invasive ventilation at home	3	
Tracheostomy and/or 24 hour ventilation	4	
Feeding - use highest score (Max 4)		
Gastrostomy/long term NG feeding (>6 months)	1	
Jejunostomy or severe uncontrolled reflux despite maximum treatment	2	
Losing weight or unable to administer essential medication due to feeding difficulties	3	
Pain/distress associated with feeding, causing progressive feed reduction or requirement for total parenteral nutrition	4	

HCCP Score

The Health Complexity in Community Paediatrics.



clinical

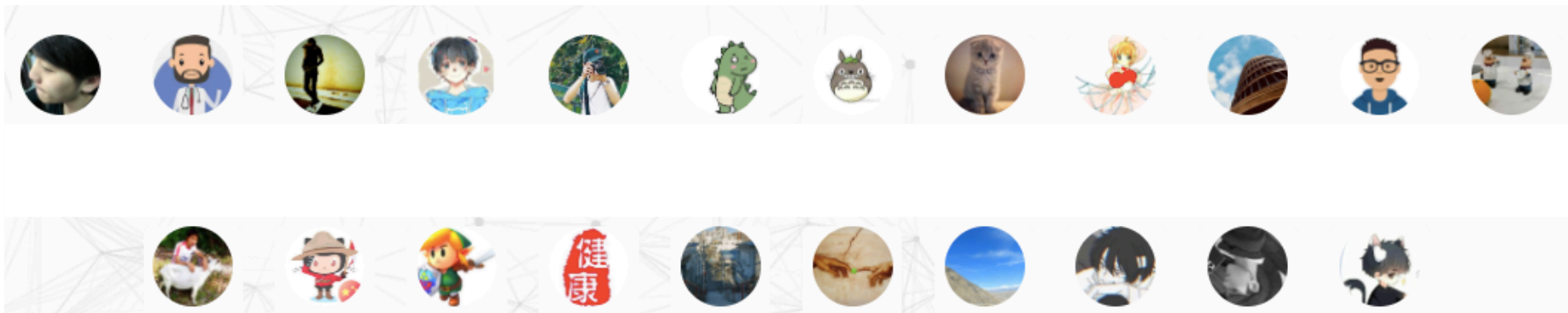


Under development

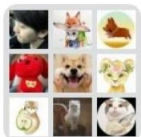
致谢



- Cancer Researchers & clinicians
- Postgraduates
- Bioinformatics Community
- Scientific We Media



用户交流社群



Hiplot可视化平台用户群-3



该二维码7天内(12月28日前)有效，重新进入将更新

从零入门科研数据可视化云平台

openbioX & Hiplot Team

2020-12-26

Hiplot Team