

main_r

August 21, 2021

1 Clustered dotplots

```
[1]: library(ggplot2)
library(tidyverse)
```

```
Attaching packages: tidyverse
1.3.1
```

```
tibble 3.1.2    dplyr  1.0.7
tidyr  1.1.3    stringr 1.4.0
readr  1.4.0    forcats 0.5.1
purrr  0.3.4
```

Conflicts

```
tidyverse_conflicts()
dplyr::filter() masks stats::filter()
dplyr::lag()    masks stats::lag()
```

```
[2]: save_plot <- function(p, fn, w, h){
  for(ext in c(".pdf", ".png", ".svg")){
    ggsave(filename=paste0(fn,ext), plot=p, width=w, height=h)
  }
}
```

1.1 Get data

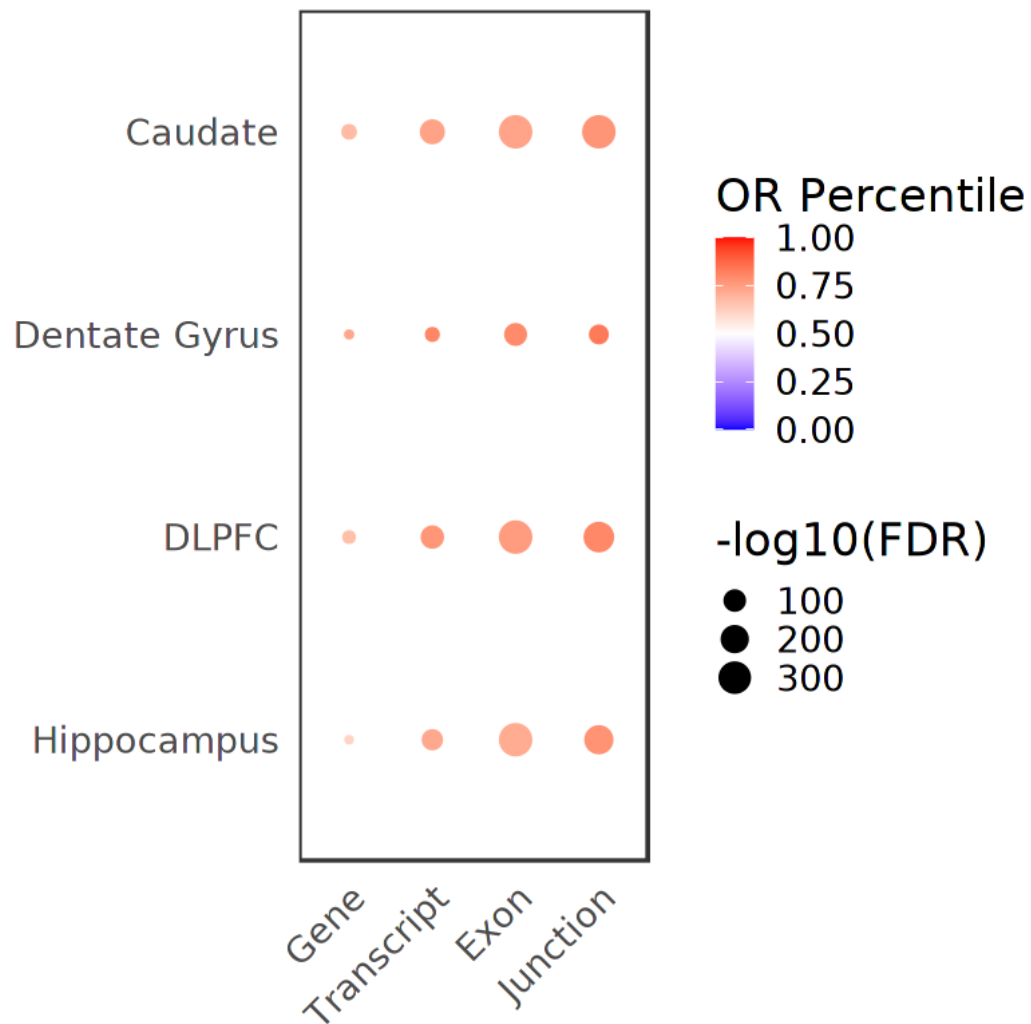
```
[3]: ds <- data.table::fread("diffSplice_enrichment_analysis.txt") %>%
  mutate_if(is.character, as.factor)
ds$Tissue <- factor(ds$Tissue, levels=c("Caudate", "Dentate Gyrus", "DLPFC",
  ↪ "Hippocampus"))
ds$Feature <- factor(ds$Feature, levels=c("Gene", "Transcript", "Exon",
  ↪ "Junction"))
ds$Tissue <- fct_relevel(ds$Tissue, rev)
```

```
[4]: dotplot <- ds %>%
  mutate(`-log10(FDR)` = -log10(FDR), `OR Percentile` = OR / (1+OR)) %>%
  filter(OR != 0) %>%
```

```

ggplot(aes(y=Tissue, x=Feature, color=`OR Percentile`, size=`-log10(FDR)`))
  geom_point() + ylab('') + xlab('') +
  scale_color_gradient2(midpoint = 0.5, low = "blue", mid = "white",
                        high = "red", space = "Lab", limits=c(0,1) ) +
  theme_bw(base_size=20) +
  theme(axis.line = element_blank(),
        axis.text.x = element_text(angle = 45, hjust=1),
        axis.ticks = element_blank(),
        legend.position="right",
        panel.grid = element_blank(),
        strip.text=element_text(face="bold"))
save_plot(dotplot, "dotplot_enrichment_diffSplice", 9, 5)
dotplot

```



1.2 Reproducibility Information

```
[5]: Sys.time()
proc.time()
options(width = 120)
sessioninfo::session_info()
```

```
[1] "2021-08-21 12:26:47 EDT"
```

```
   user  system elapsed
3.587   0.218   4.109
```

Session info

```
setting  value
version  R version 4.0.3 (2020-10-10)
os       Arch Linux
system   x86_64, linux-gnu
ui       X11
language (EN)
collate  en_US.UTF-8
ctype    en_US.UTF-8
tz       America/New_York
date     2021-08-21
```

Packages

package	* version	date	lib	source
assertthat	0.2.1	2019-03-21	[1]	CRAN (R 4.0.2)
backports	1.2.1	2020-12-09	[1]	CRAN (R 4.0.2)
base64enc	0.1-3	2015-07-28	[1]	CRAN (R 4.0.2)
broom	0.7.8	2021-06-24	[1]	CRAN (R 4.0.3)
Cairo	1.5-12.2	2020-07-07	[1]	CRAN (R 4.0.2)
cellranger	1.1.0	2016-07-27	[1]	CRAN (R 4.0.2)
cli	3.0.0	2021-06-30	[1]	CRAN (R 4.0.3)
colorspace	2.0-2	2021-06-24	[1]	CRAN (R 4.0.3)
crayon	1.4.1	2021-02-08	[1]	CRAN (R 4.0.3)
data.table	1.14.0	2021-02-21	[1]	CRAN (R 4.0.3)
DBI	1.1.1	2021-01-15	[1]	CRAN (R 4.0.2)
dbplyr	2.1.1	2021-04-06	[1]	CRAN (R 4.0.3)
digest	0.6.27	2020-10-24	[1]	CRAN (R 4.0.2)
dplyr	* 1.0.7	2021-06-18	[1]	CRAN (R 4.0.3)
ellipsis	0.3.2	2021-04-29	[1]	CRAN (R 4.0.3)
evaluate	0.14	2019-05-28	[1]	CRAN (R 4.0.2)
fansi	0.5.0	2021-05-25	[1]	CRAN (R 4.0.3)
farver	2.1.0	2021-02-28	[1]	CRAN (R 4.0.3)
forcats	* 0.5.1	2021-01-27	[1]	CRAN (R 4.0.2)
fs	1.5.0	2020-07-31	[1]	CRAN (R 4.0.2)
generics	0.1.0	2020-10-31	[1]	CRAN (R 4.0.2)

ggplot2	*	3.3.5	2021-06-25	[1]	CRAN	(R 4.0.3)
glue		1.4.2	2020-08-27	[1]	CRAN	(R 4.0.2)
gtable		0.3.0	2019-03-25	[1]	CRAN	(R 4.0.2)
haven		2.4.1	2021-04-23	[1]	CRAN	(R 4.0.3)
hms		1.1.0	2021-05-17	[1]	CRAN	(R 4.0.3)
htmltools		0.5.1.1	2021-01-22	[1]	CRAN	(R 4.0.2)
httr		1.4.2	2020-07-20	[1]	CRAN	(R 4.0.2)
IRdisplay		1.0	2021-01-20	[1]	CRAN	(R 4.0.2)
IRkernel		1.2	2021-05-11	[1]	CRAN	(R 4.0.3)
jsonlite		1.7.2	2020-12-09	[1]	CRAN	(R 4.0.2)
labeling		0.4.2	2020-10-20	[1]	CRAN	(R 4.0.2)
lifecycle		1.0.0	2021-02-15	[1]	CRAN	(R 4.0.3)
lubridate		1.7.10	2021-02-26	[1]	CRAN	(R 4.0.3)
magrittr		2.0.1	2020-11-17	[1]	CRAN	(R 4.0.2)
modelr		0.1.8	2020-05-19	[1]	CRAN	(R 4.0.2)
munsell		0.5.0	2018-06-12	[1]	CRAN	(R 4.0.2)
pbdZMQ		0.3-5	2021-02-10	[1]	CRAN	(R 4.0.3)
pillar		1.6.1	2021-05-16	[1]	CRAN	(R 4.0.3)
pkgconfig		2.0.3	2019-09-22	[1]	CRAN	(R 4.0.2)
purrr	*	0.3.4	2020-04-17	[1]	CRAN	(R 4.0.2)
R6		2.5.0	2020-10-28	[1]	CRAN	(R 4.0.2)
Rcpp		1.0.7	2021-07-07	[1]	CRAN	(R 4.0.3)
readr	*	1.4.0	2020-10-05	[1]	CRAN	(R 4.0.2)
readxl		1.3.1	2019-03-13	[1]	CRAN	(R 4.0.2)
repr		1.1.3	2021-01-21	[1]	CRAN	(R 4.0.2)
reprex		2.0.0	2021-04-02	[1]	CRAN	(R 4.0.3)
rlang		0.4.11	2021-04-30	[1]	CRAN	(R 4.0.3)
rstudioapi		0.13	2020-11-12	[1]	CRAN	(R 4.0.2)
rvest		1.0.0	2021-03-09	[1]	CRAN	(R 4.0.3)
scales		1.1.1	2020-05-11	[1]	CRAN	(R 4.0.2)
sessioninfo		1.1.1	2018-11-05	[1]	CRAN	(R 4.0.2)
stringi		1.7.3	2021-07-16	[1]	CRAN	(R 4.0.3)
stringr	*	1.4.0	2019-02-10	[1]	CRAN	(R 4.0.2)
svglite		2.0.0	2021-02-20	[1]	CRAN	(R 4.0.3)
systemfonts		1.0.2	2021-05-11	[1]	CRAN	(R 4.0.3)
tibble	*	3.1.2	2021-05-16	[1]	CRAN	(R 4.0.3)
tidyr	*	1.1.3	2021-03-03	[1]	CRAN	(R 4.0.3)
tidyselect		1.1.1	2021-04-30	[1]	CRAN	(R 4.0.3)
tidyverse	*	1.3.1	2021-04-15	[1]	CRAN	(R 4.0.3)
utf8		1.2.1	2021-03-12	[1]	CRAN	(R 4.0.3)
uuid		0.1-4	2020-02-26	[1]	CRAN	(R 4.0.2)
vctrs		0.3.8	2021-04-29	[1]	CRAN	(R 4.0.3)
withr		2.4.2	2021-04-18	[1]	CRAN	(R 4.0.3)
xml2		1.3.2	2020-04-23	[1]	CRAN	(R 4.0.2)

[1] /home/jbenja13/R/x86_64-pc-linux-gnu-library/4.0

[2] /usr/lib/R/library