

# new\_benchmarking

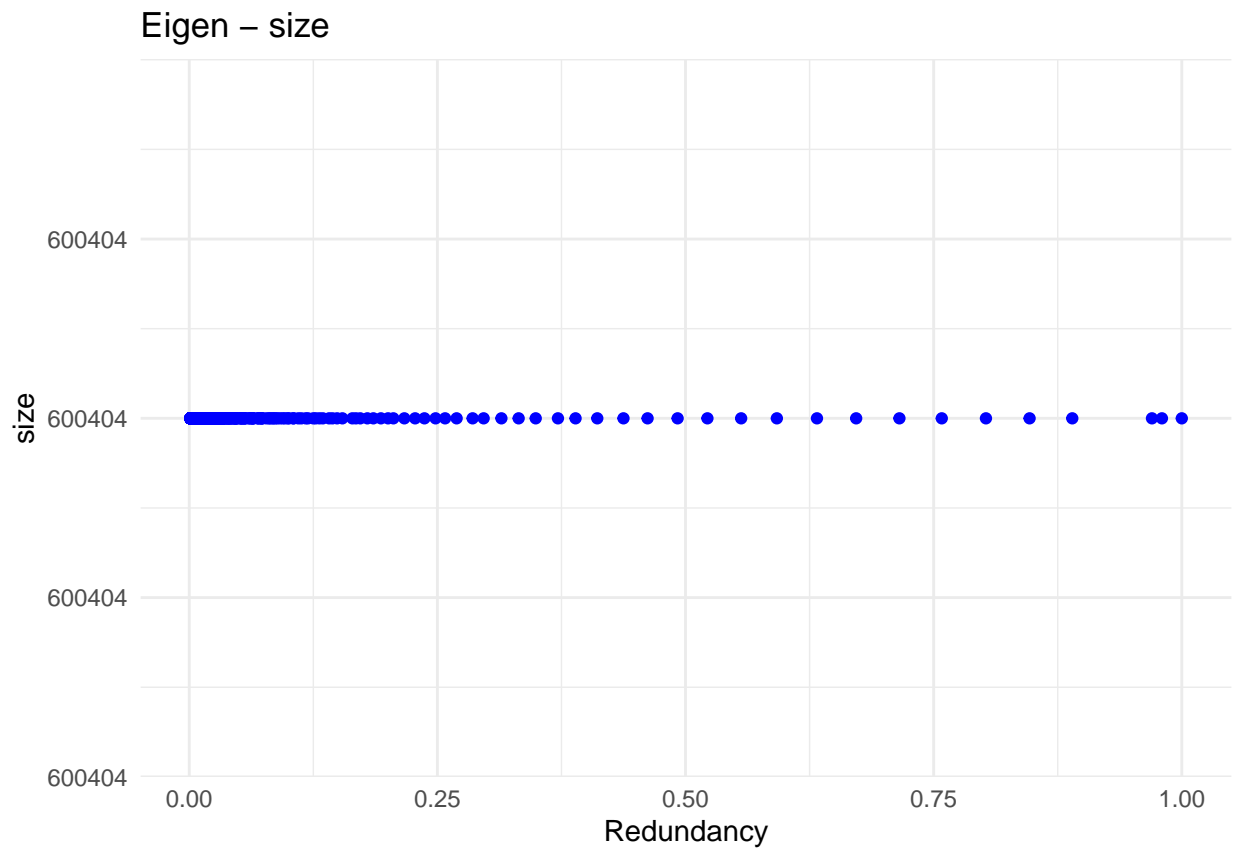
2023-07-21

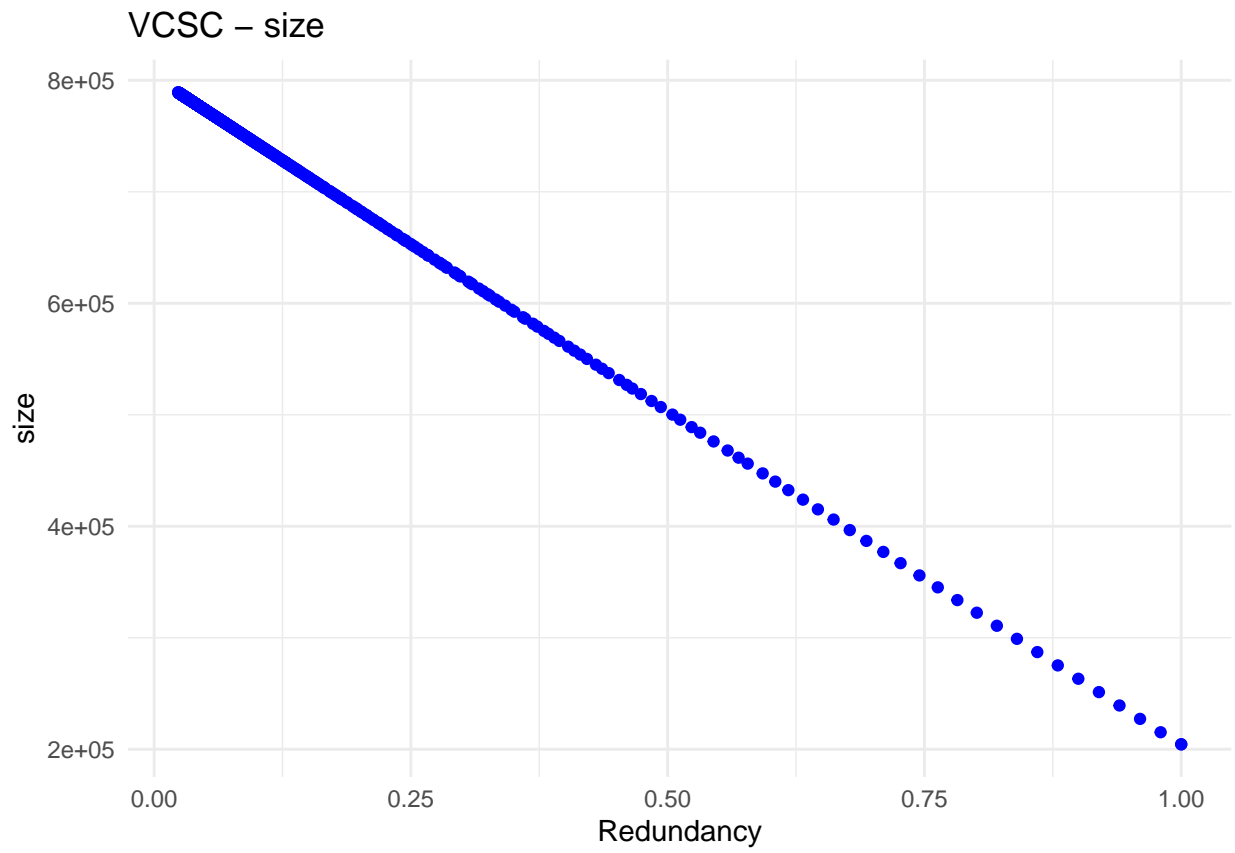
```
##
## Attaching package: 'dplyr'
##
## The following objects are masked from 'package:stats':
##
##   filter, lag
##
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

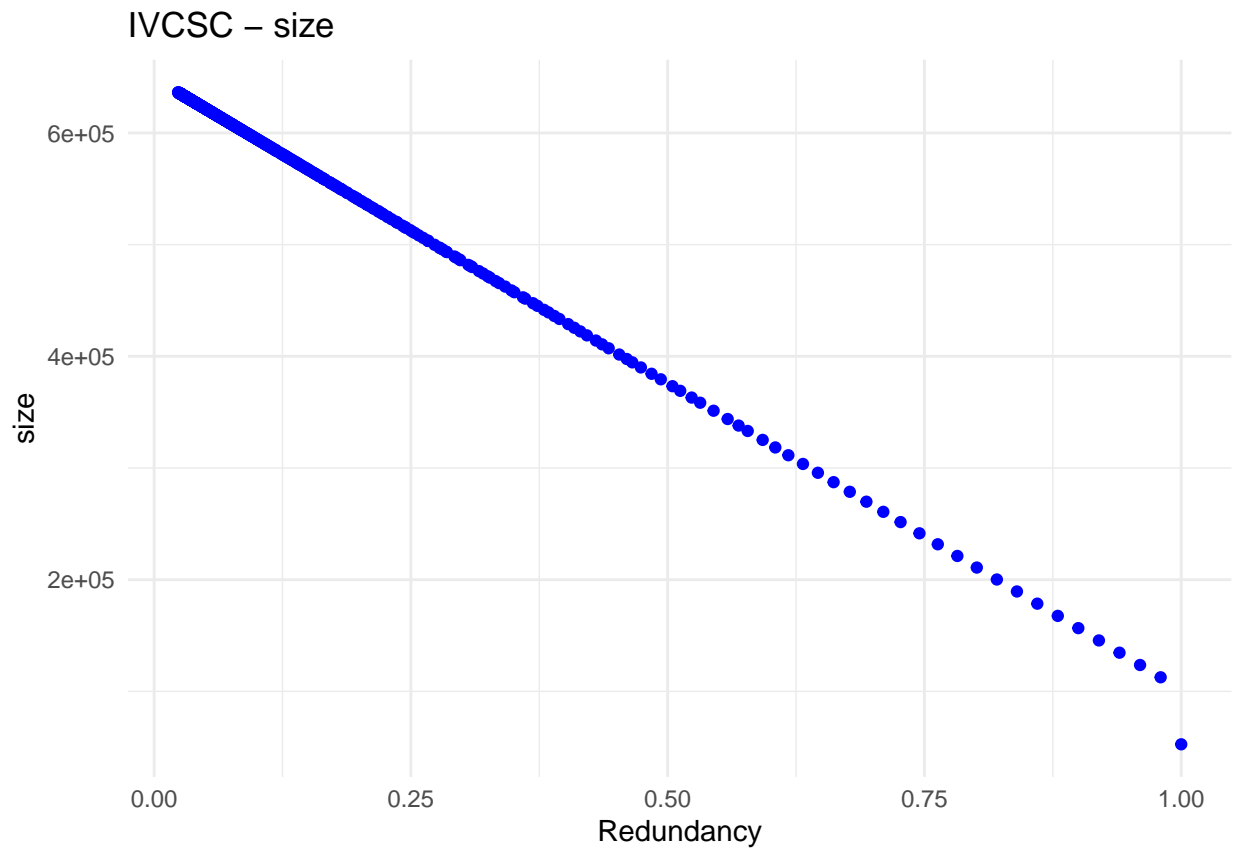
## Averages of Data at 5% Density

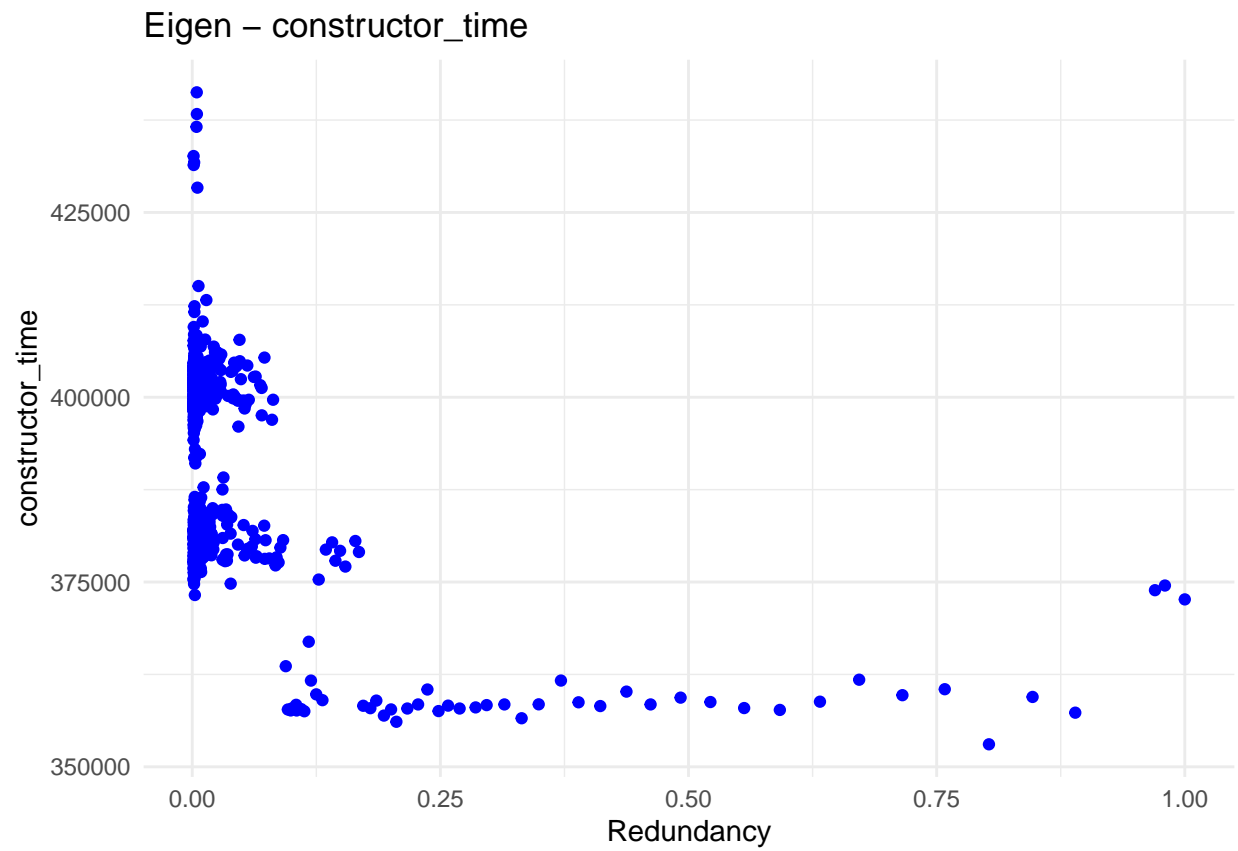
```
## Warning: Using an external vector in selections was deprecated in tidysselect 1.1.0.
## i Please use `all_of()` or `any_of()` instead.
##   # Was:
##   data %>% select(y_col)
##
##   # Now:
##   data %>% select(all_of(y_col))
##
## See <https://tidysselect.r-lib.org/reference/faq-external-vector.html>.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_lifecycle_warnings()` to see where this warning was
## generated.

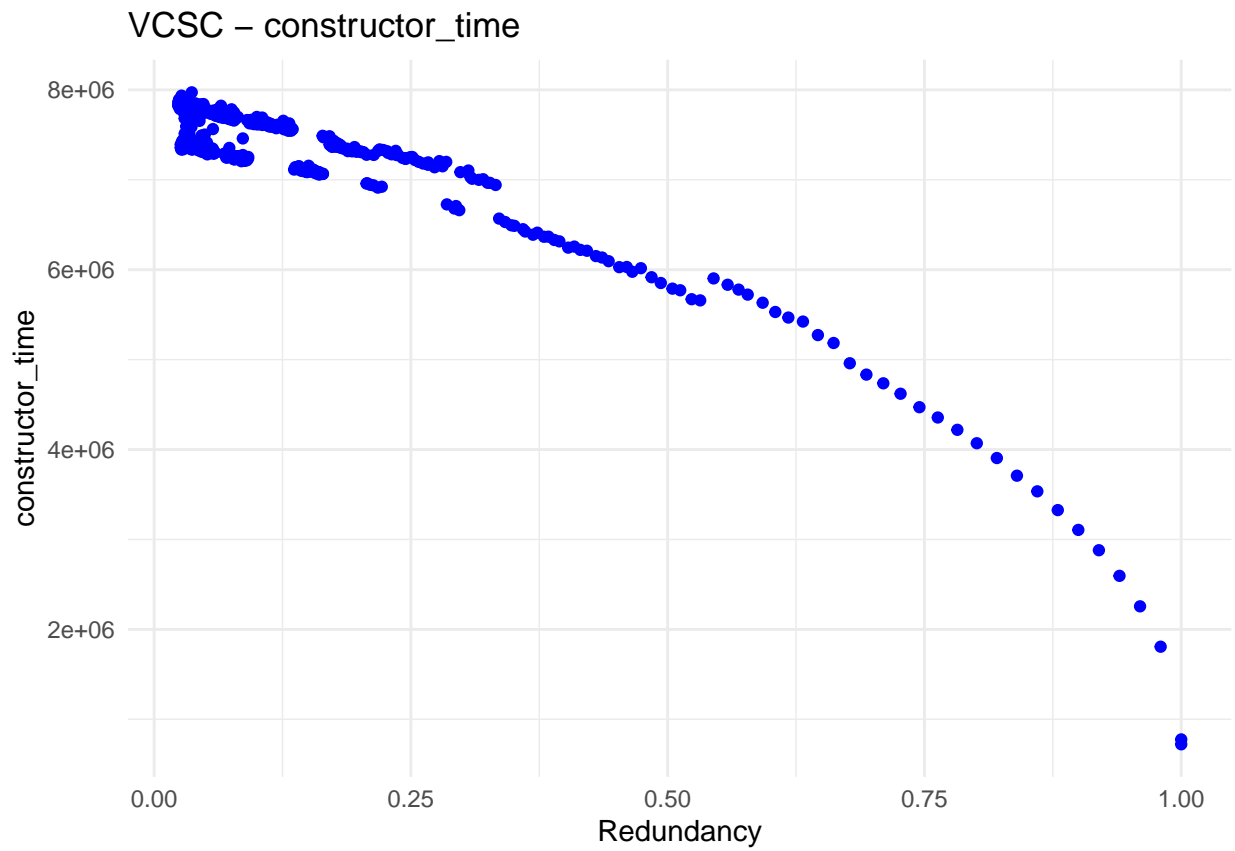
## Warning: `aes_string()` was deprecated in ggplot2 3.0.0.
## i Please use tidy evaluation idioms with `aes()`.
## i See also `vignette("ggplot2-in-packages")` for more information.
## This warning is displayed once every 8 hours.
## Call `lifecycle::last_lifecycle_warnings()` to see where this warning was
## generated.
```

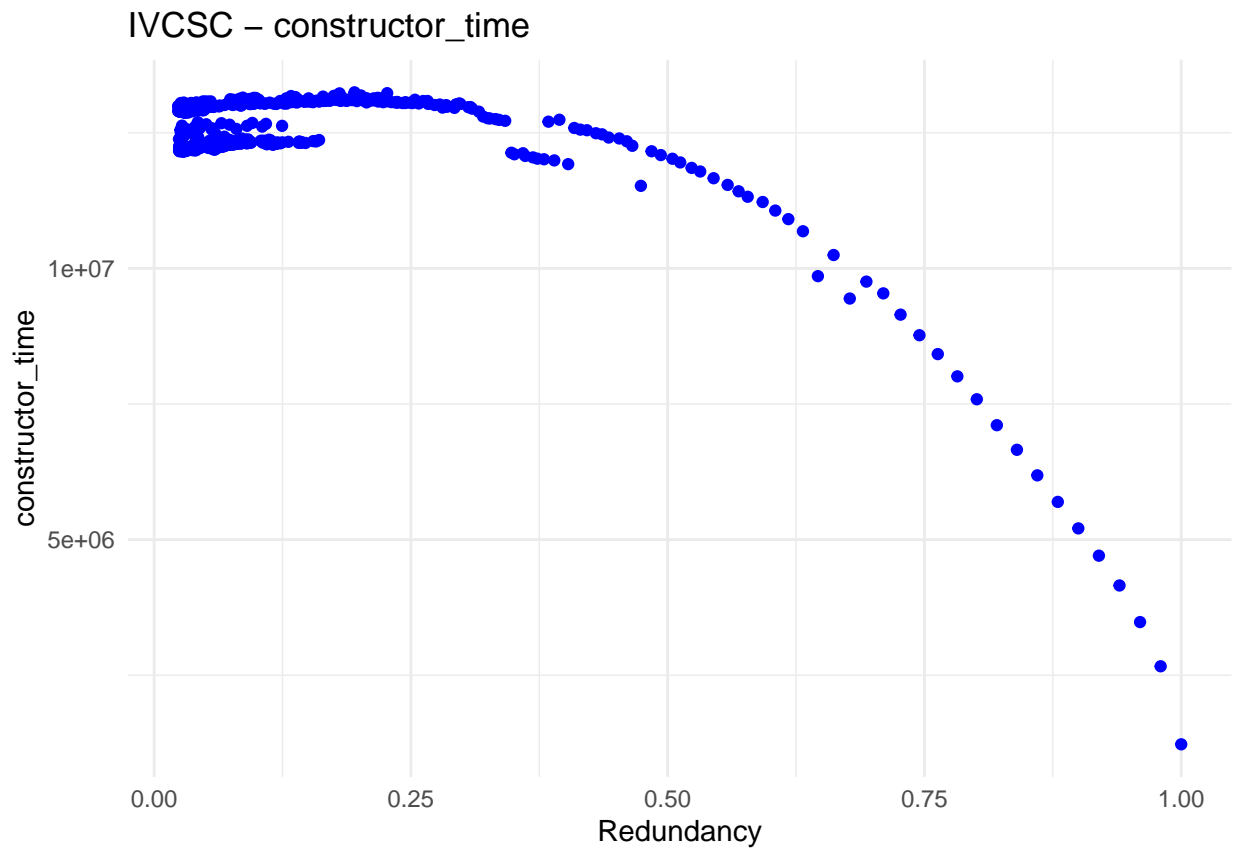


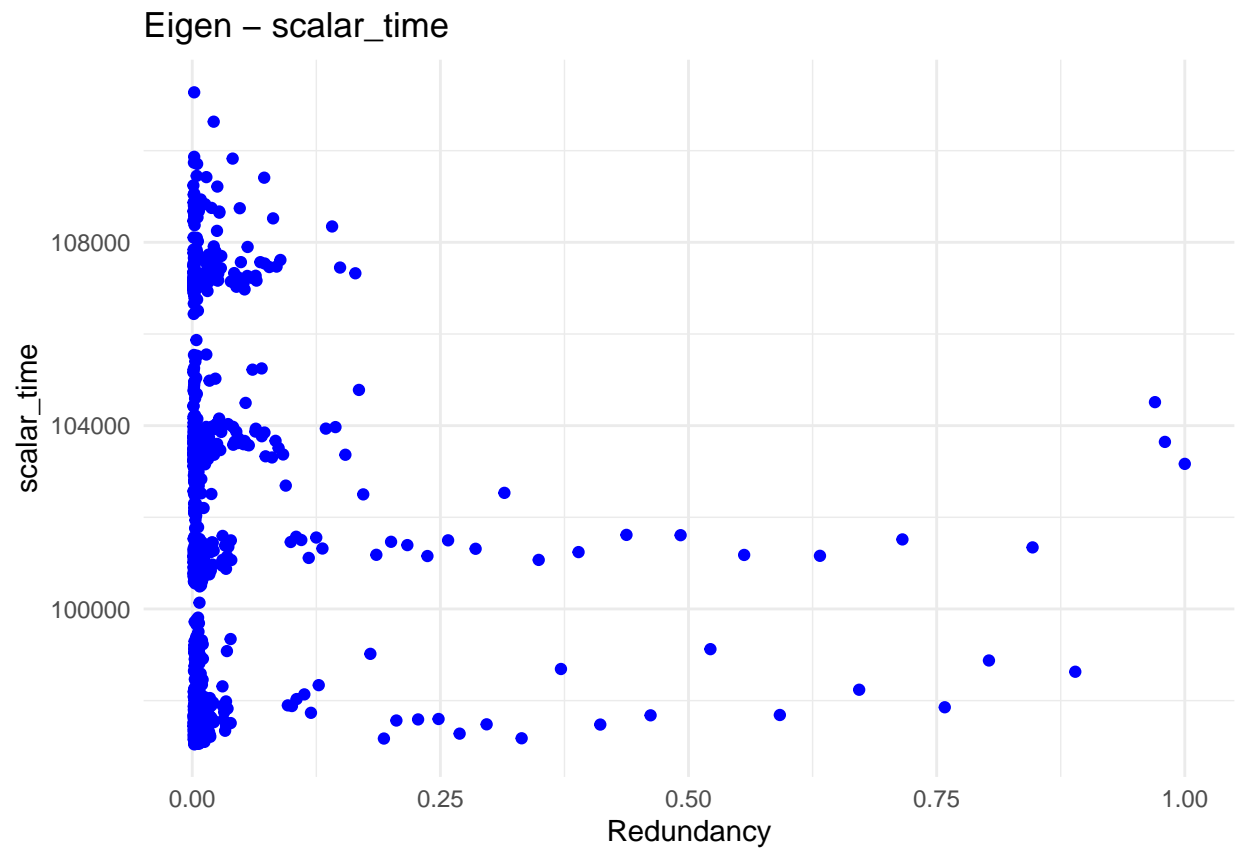




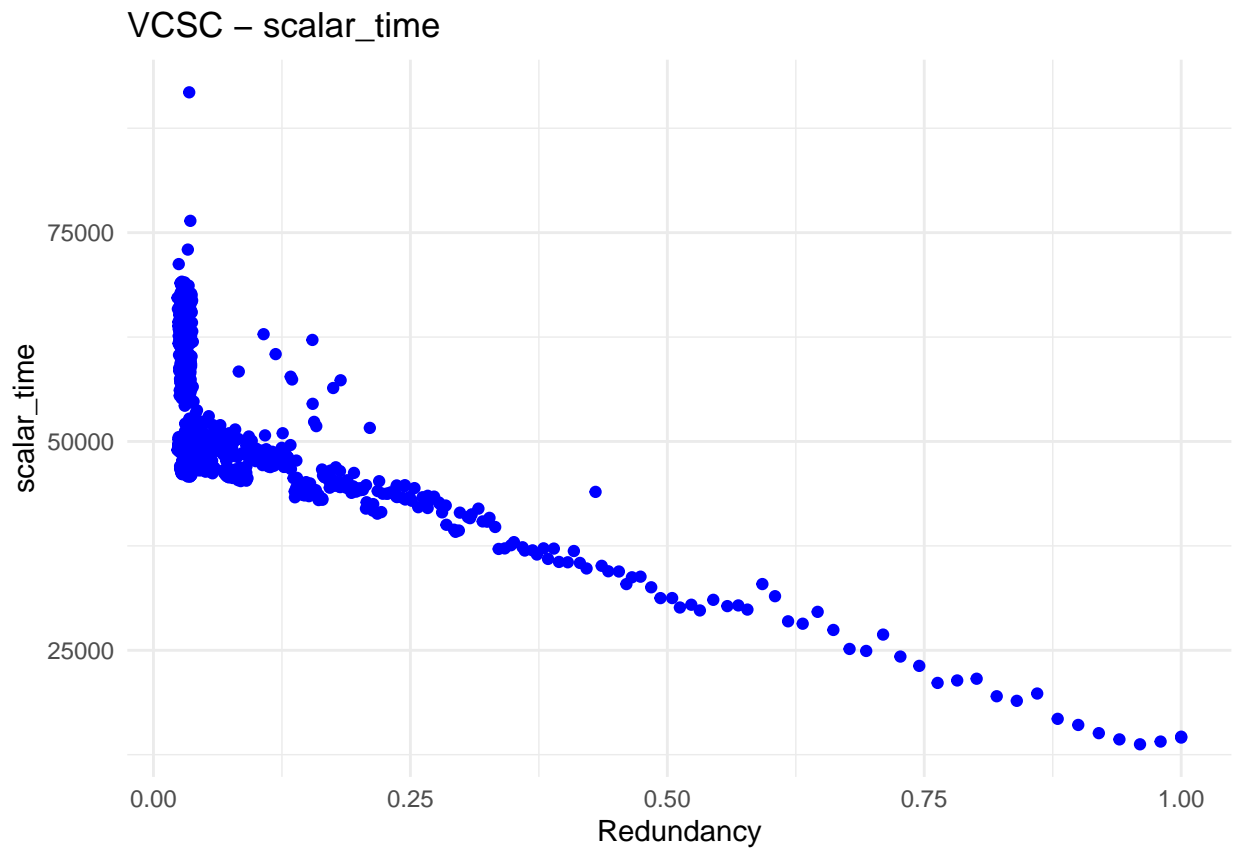


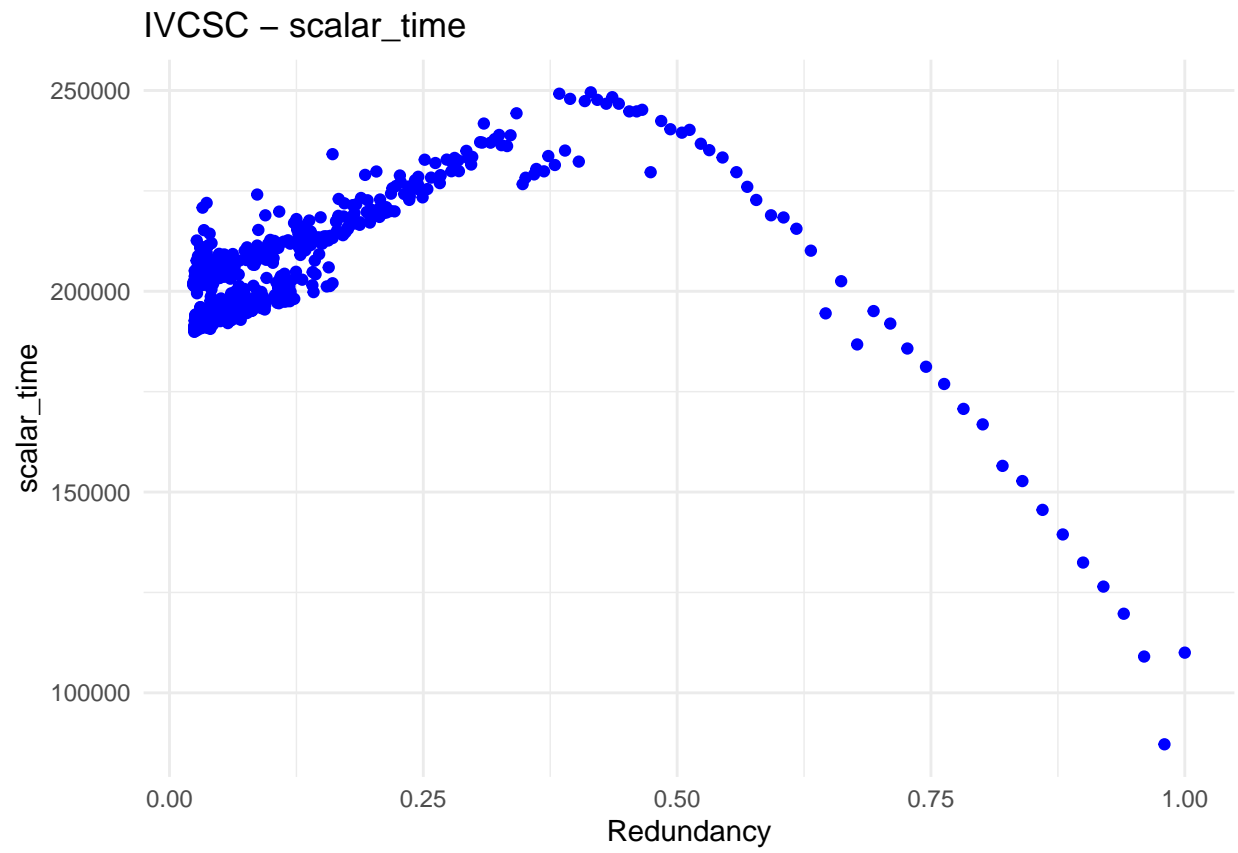


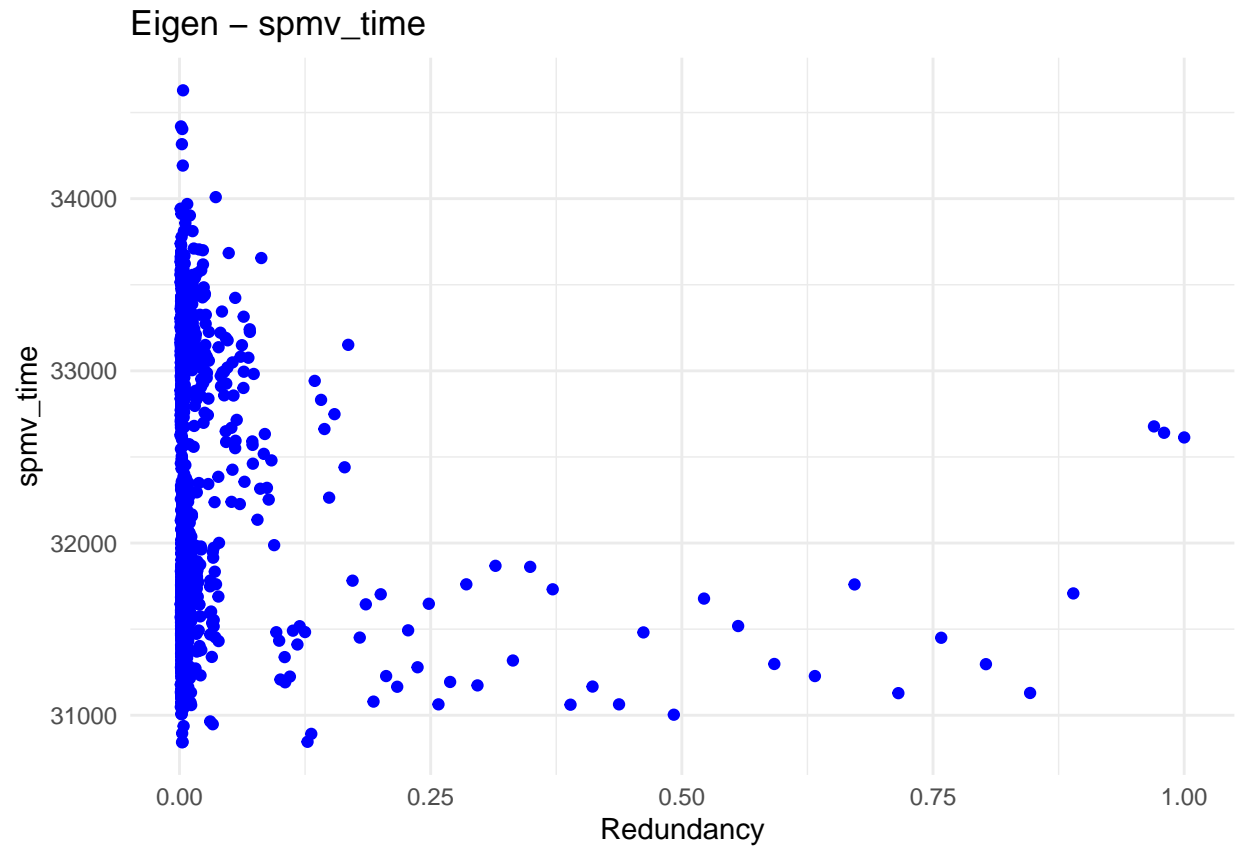


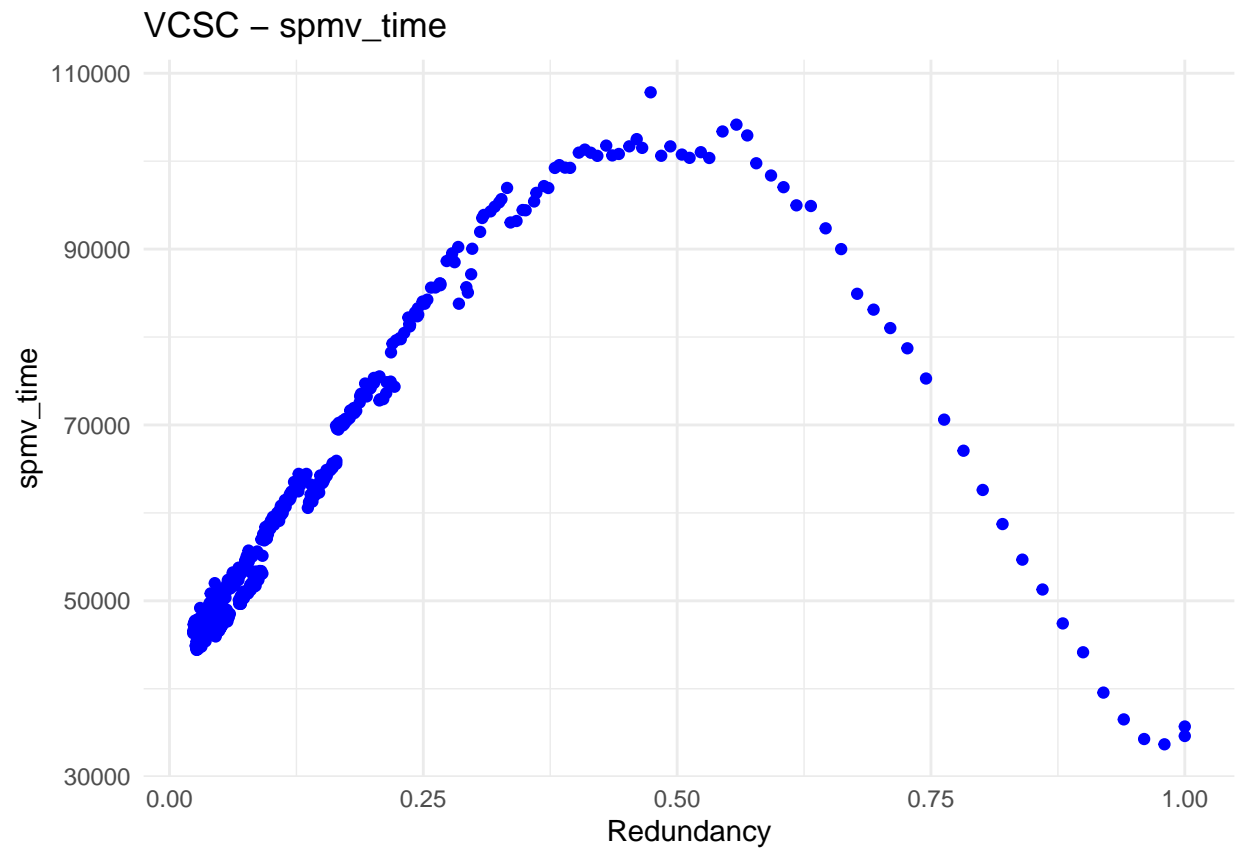


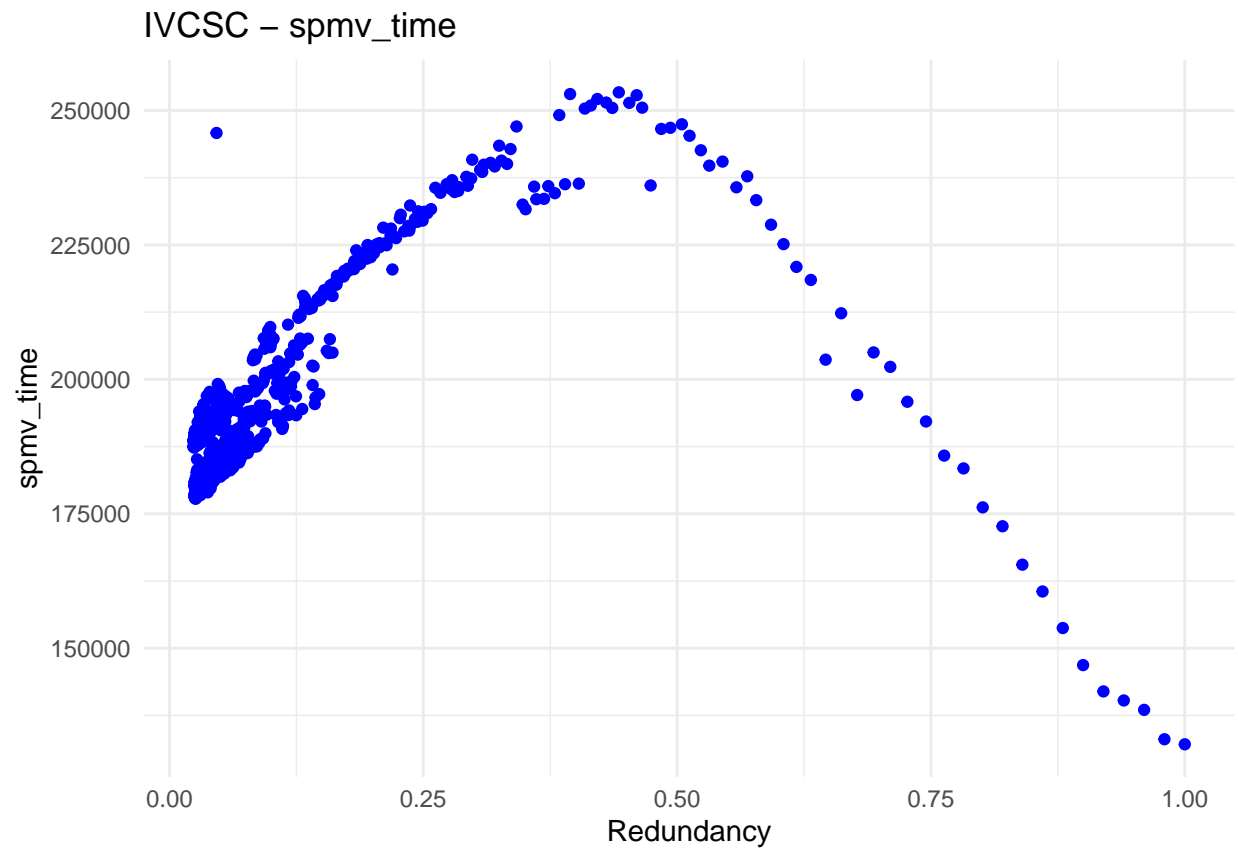


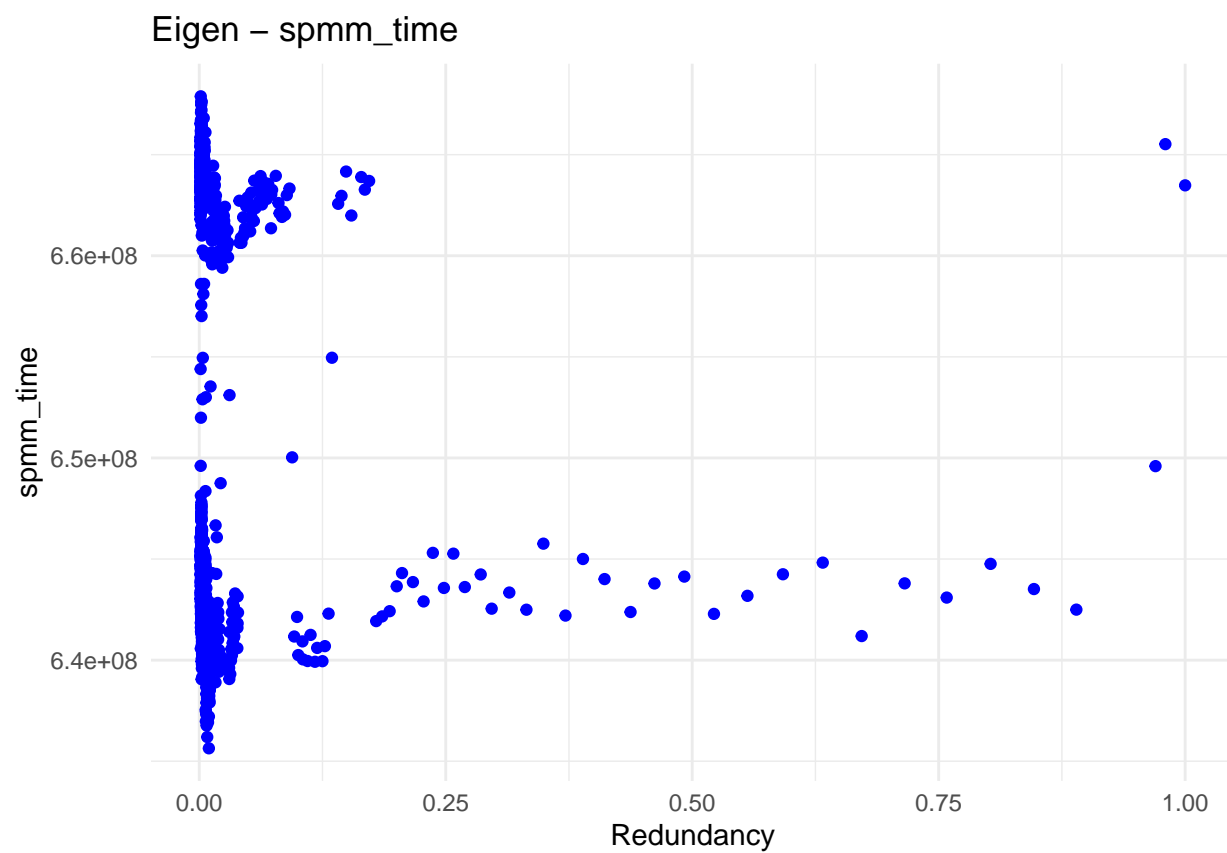


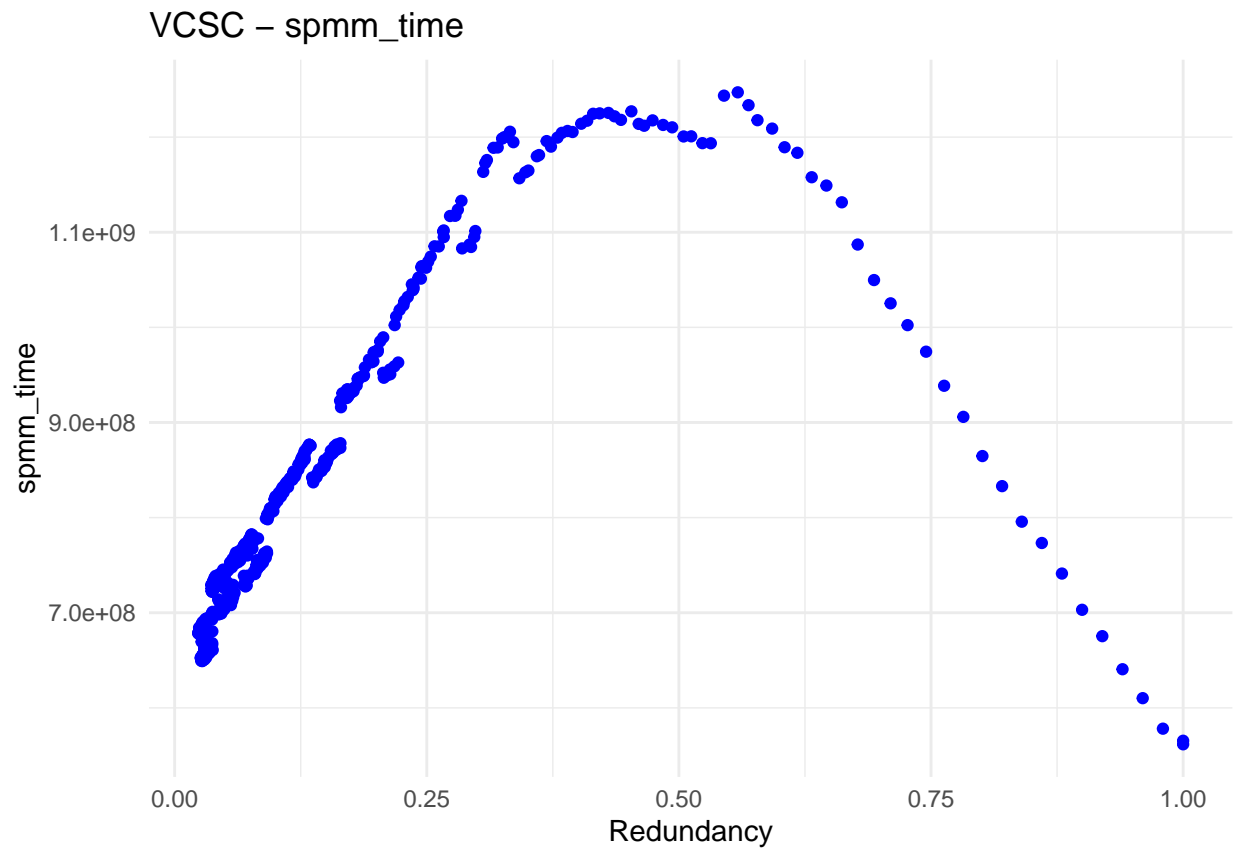


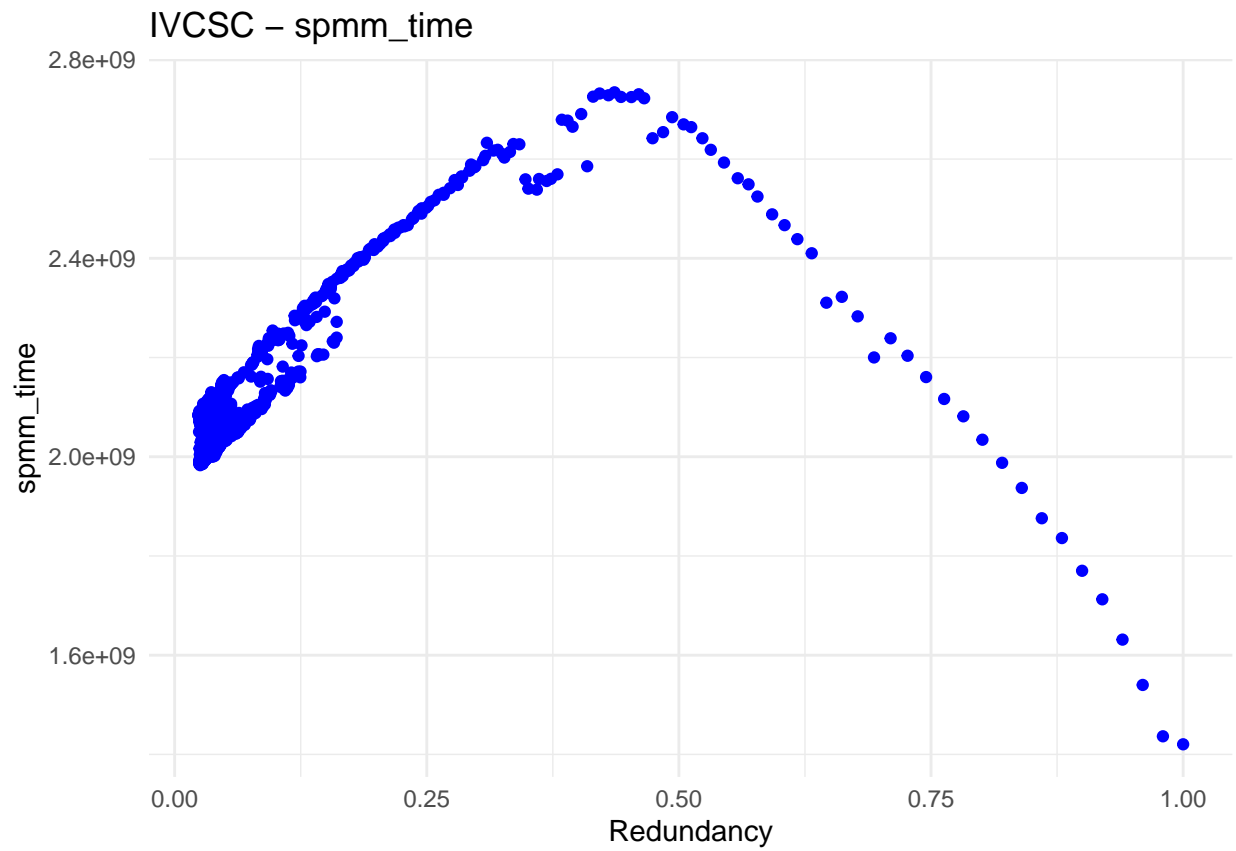








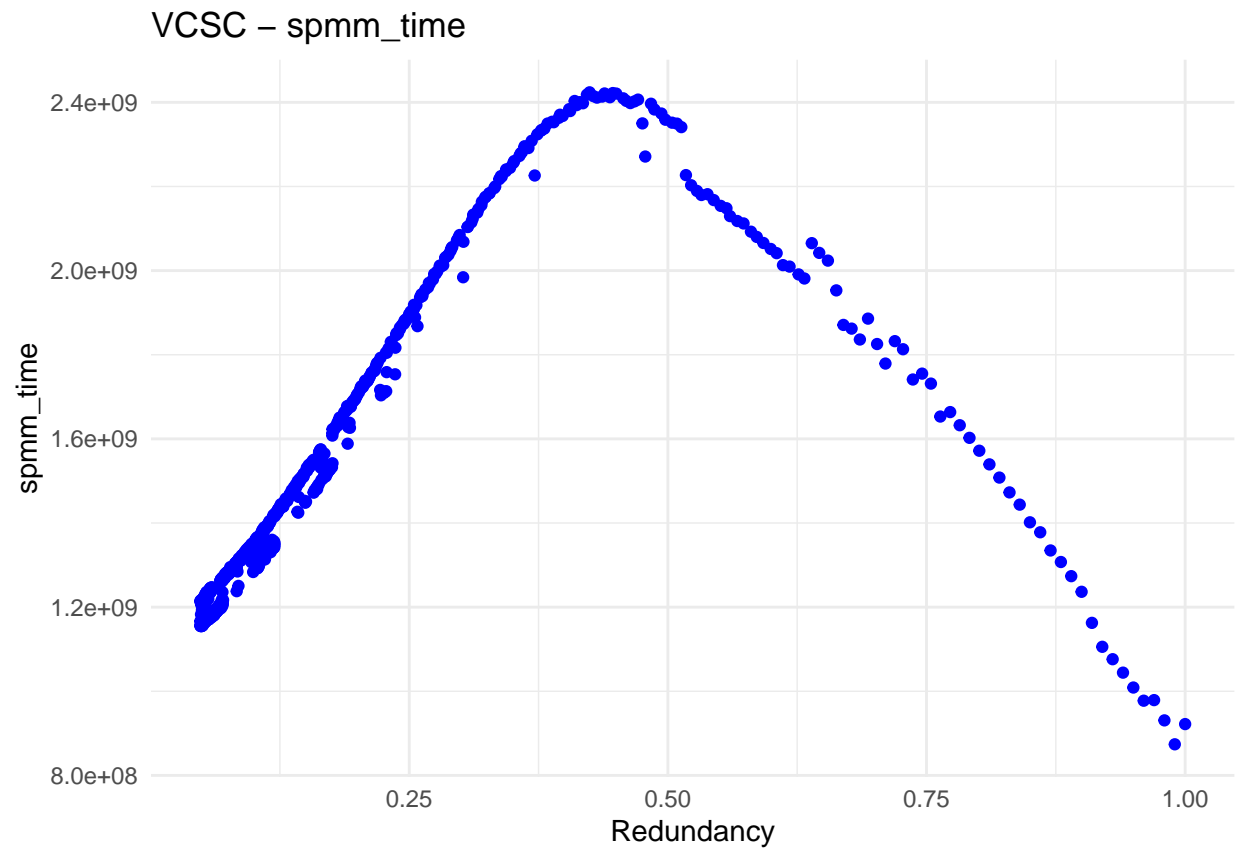


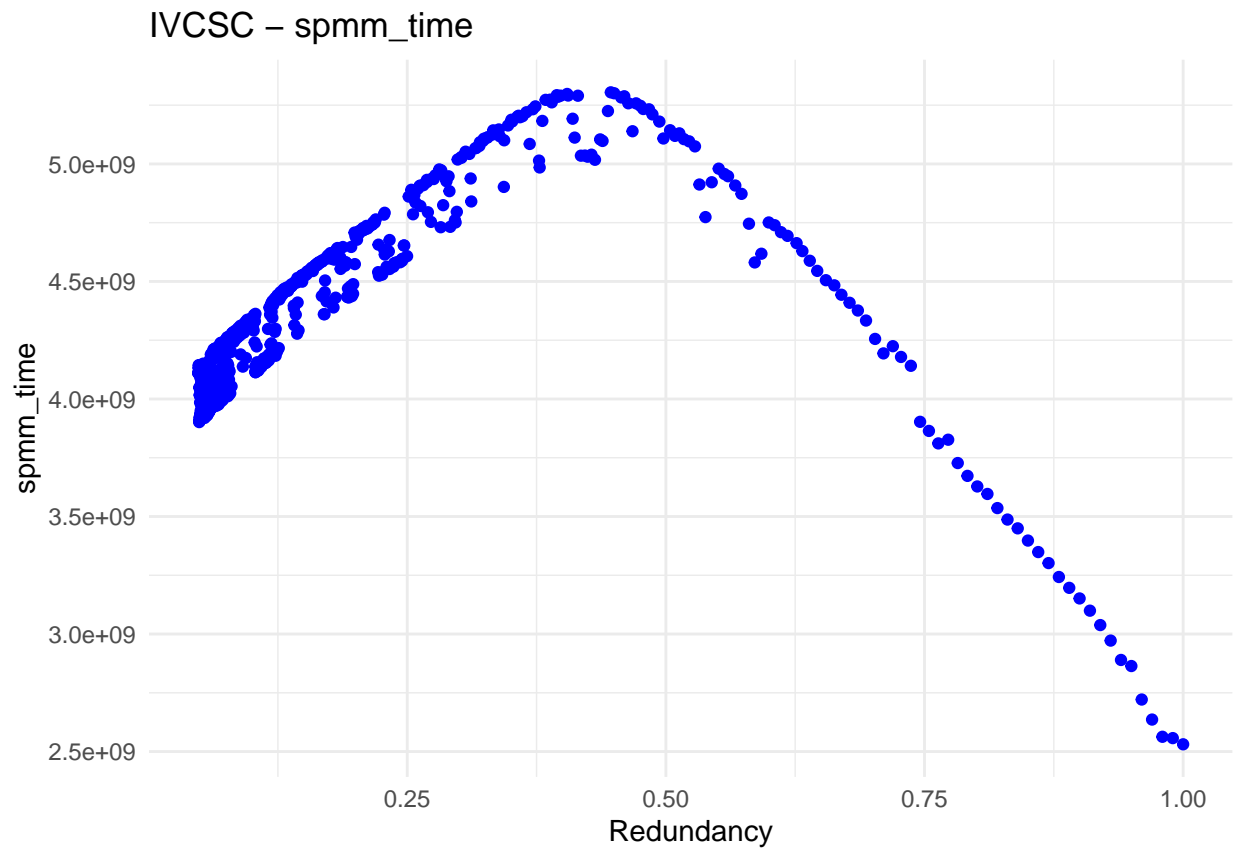


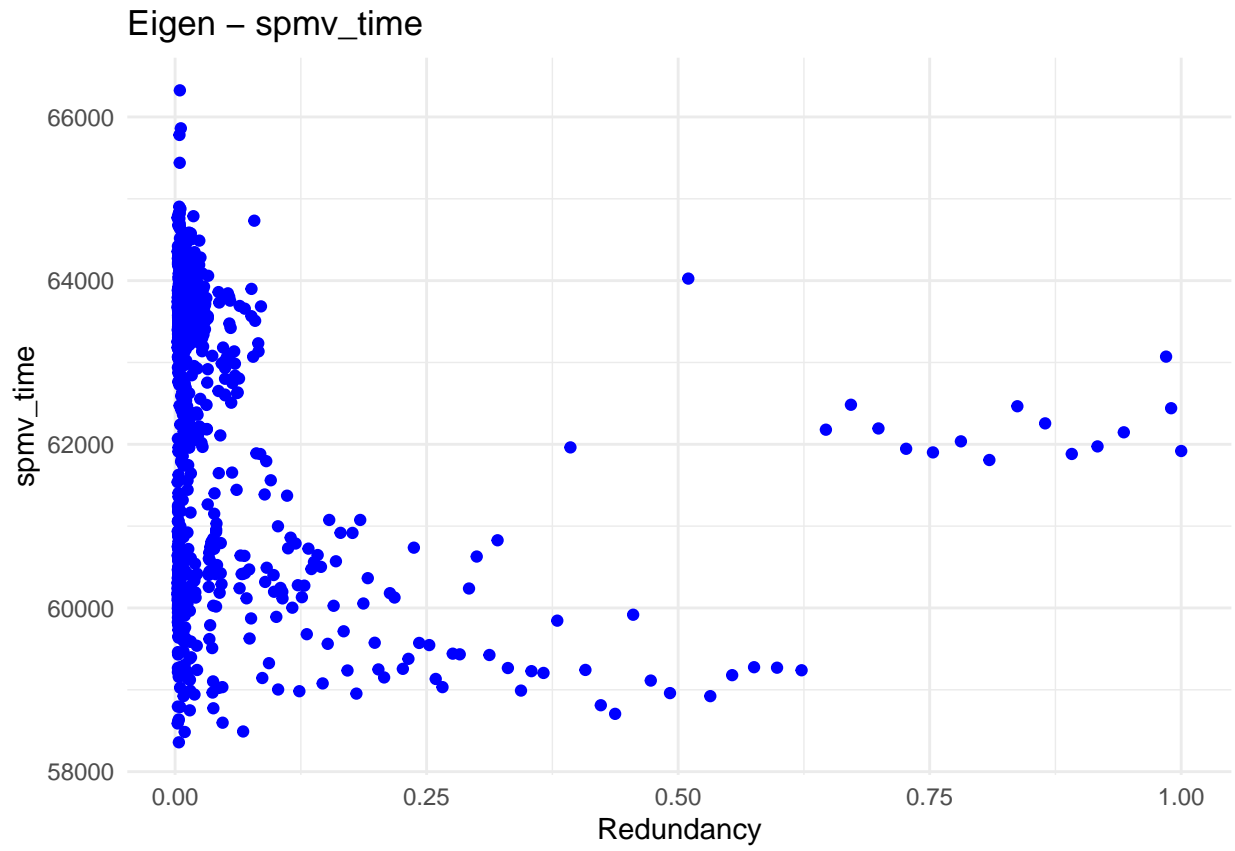
## Averages of Data at 10% Density

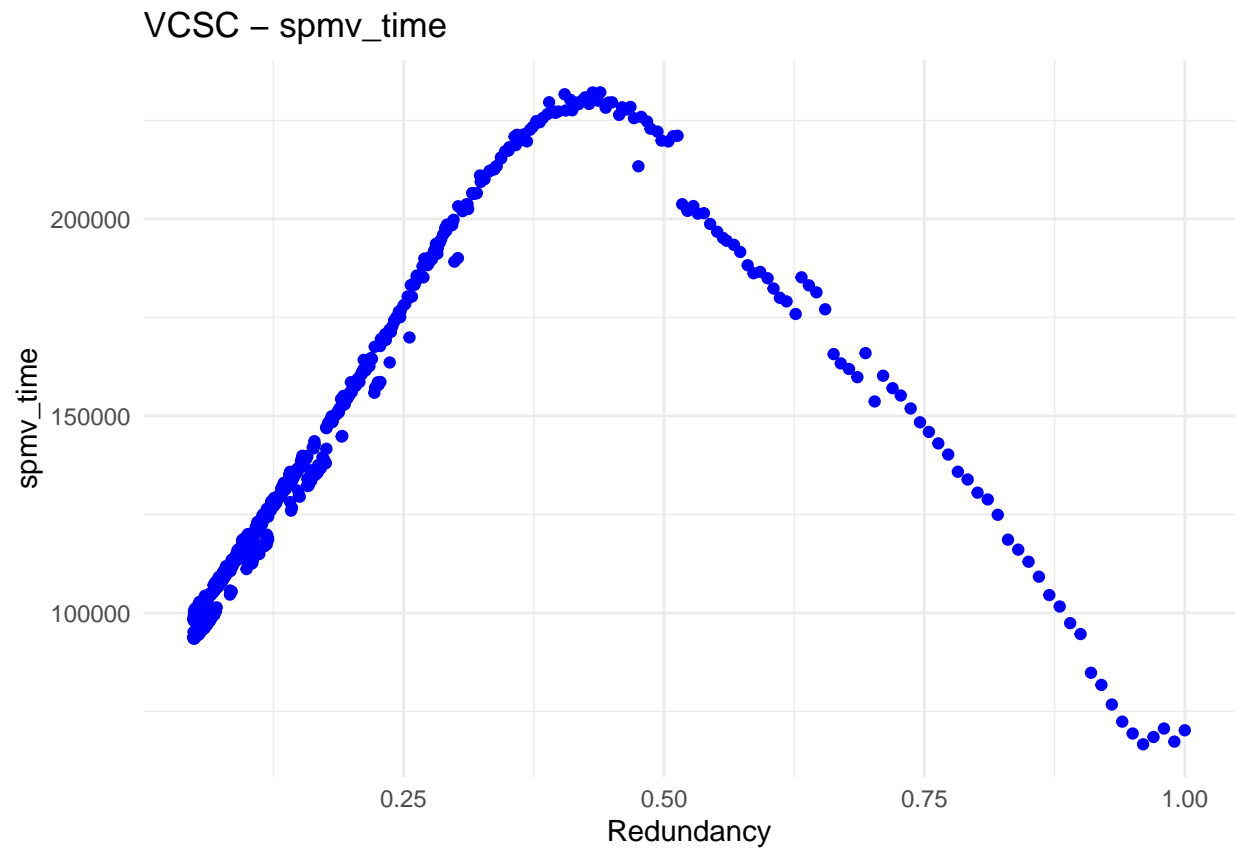


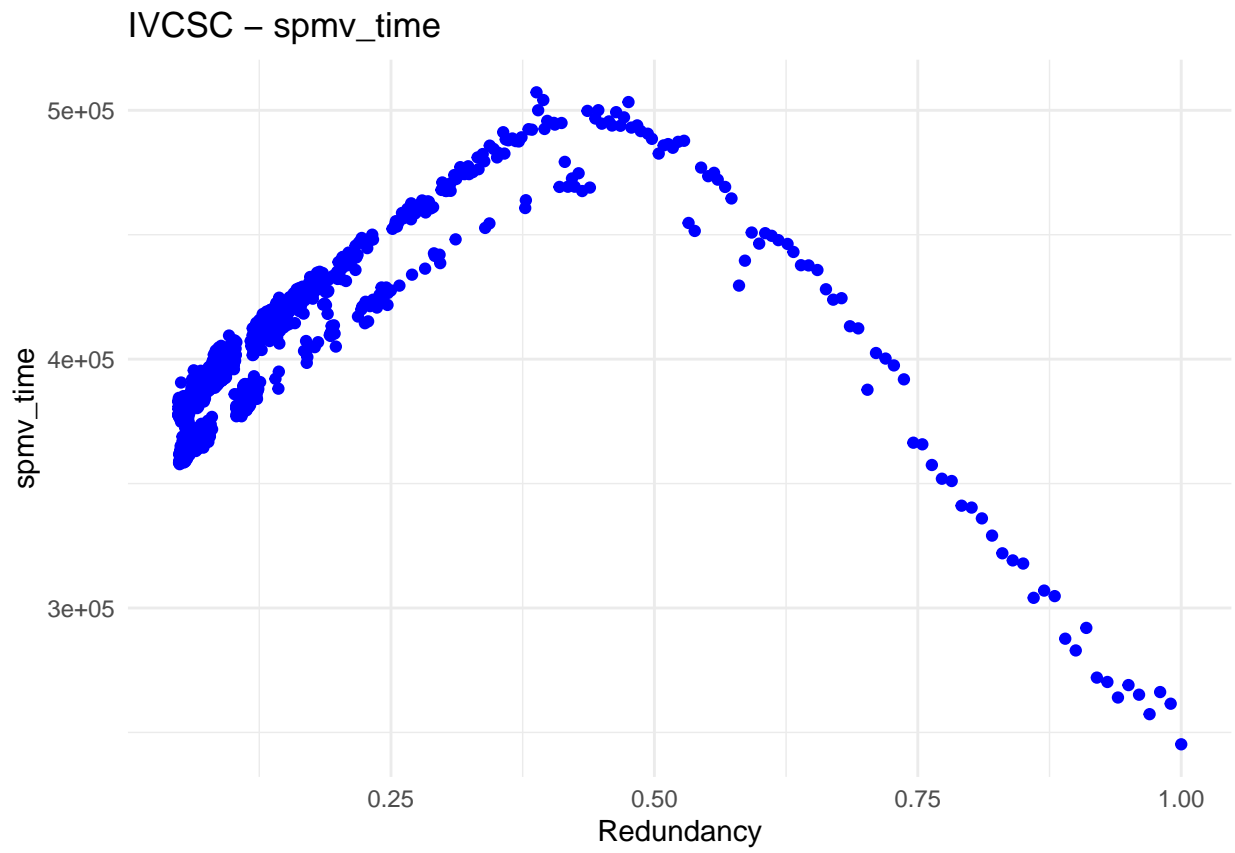




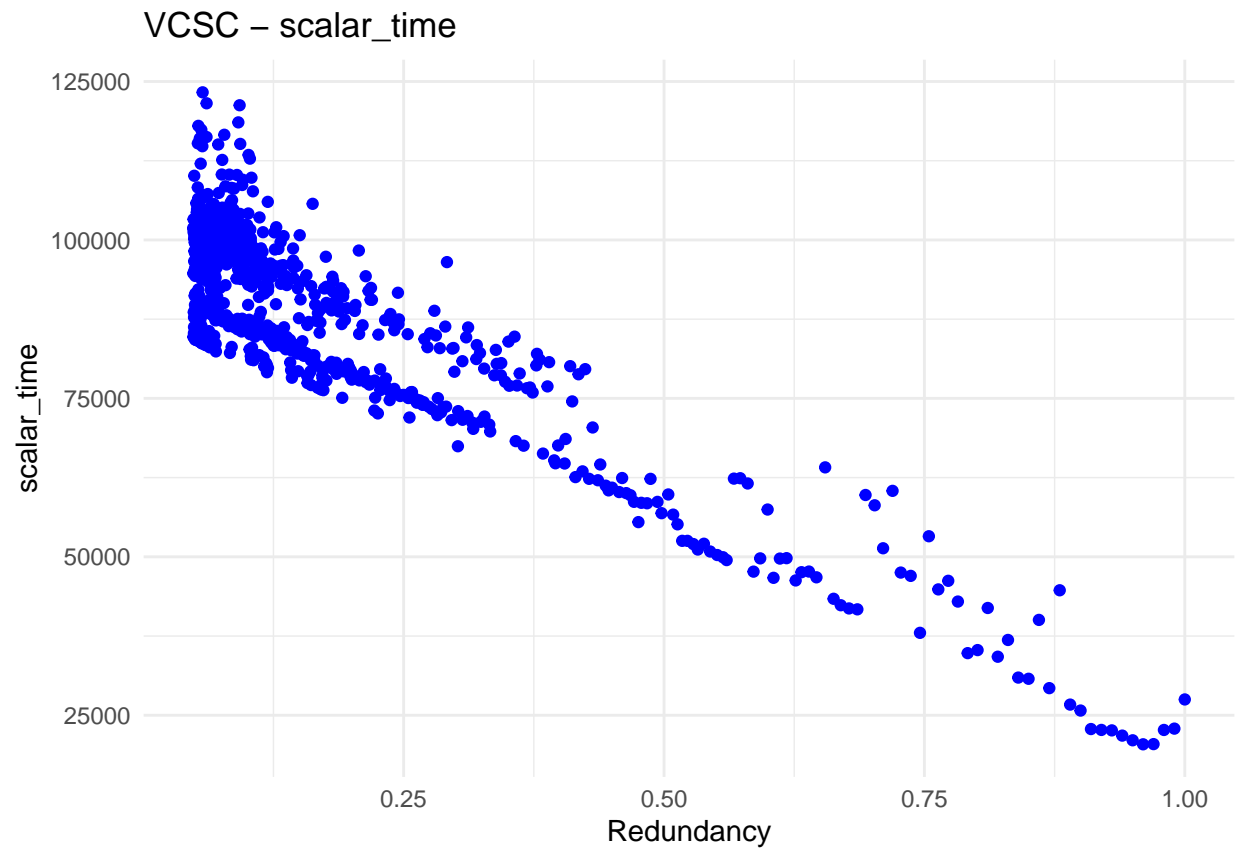




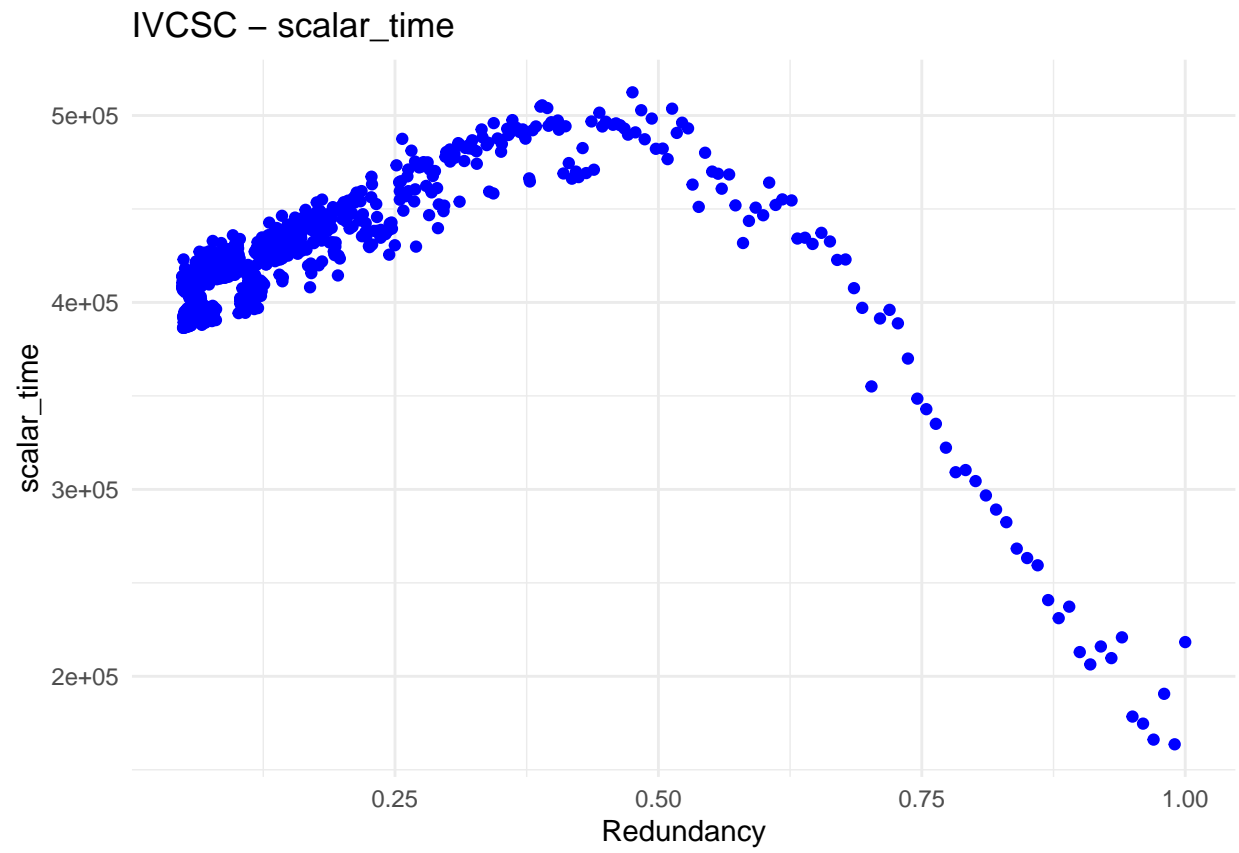


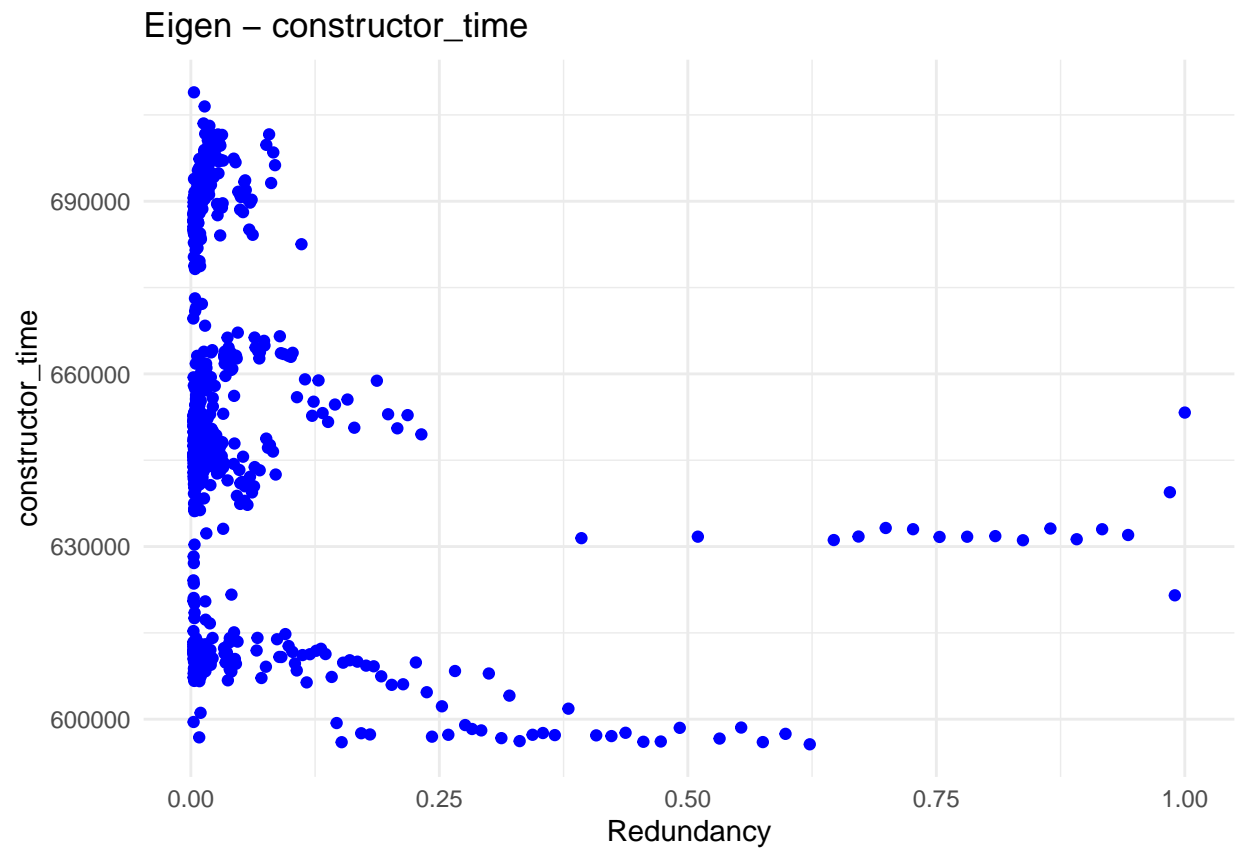


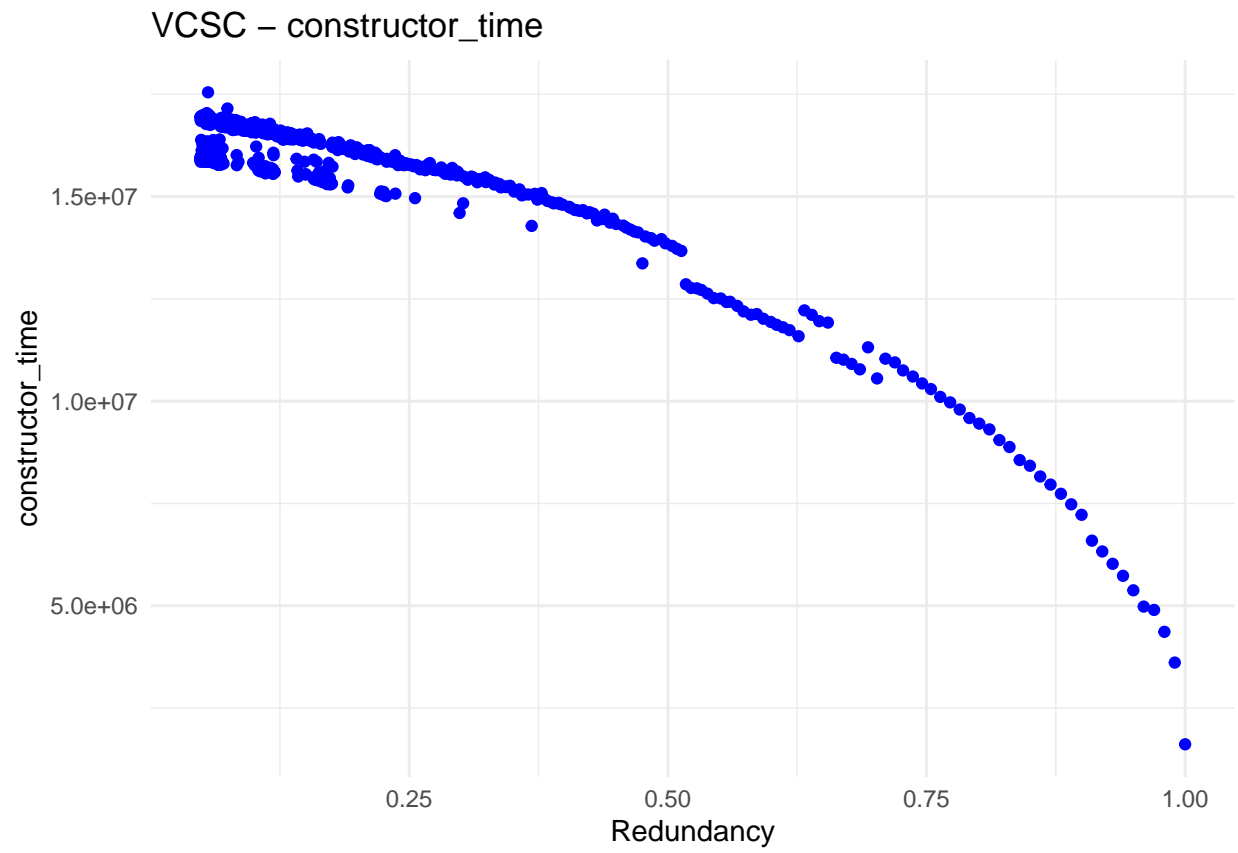
A scatter plot showing the relationship between Redundancy (x-axis) and Information (y-axis) for two groups of variables. The x-axis ranges from 0.00 to 1.00, and the y-axis ranges from 0.00 to 1.00. The top group (blue dots) shows a dense cluster of points near (0.00, 0.50) and a sparse distribution of points along the top edge (Information = 1.00) for Redundancy values between 0.40 and 1.00. The bottom group (orange dots) shows a dense cluster of points near (0.00, 0.00) and a sparse distribution of points along the bottom edge (Information = 0.00) for Redundancy values between 0.40 and 1.00. Both groups show a high density of points at low Redundancy values (0.00 to 0.25).

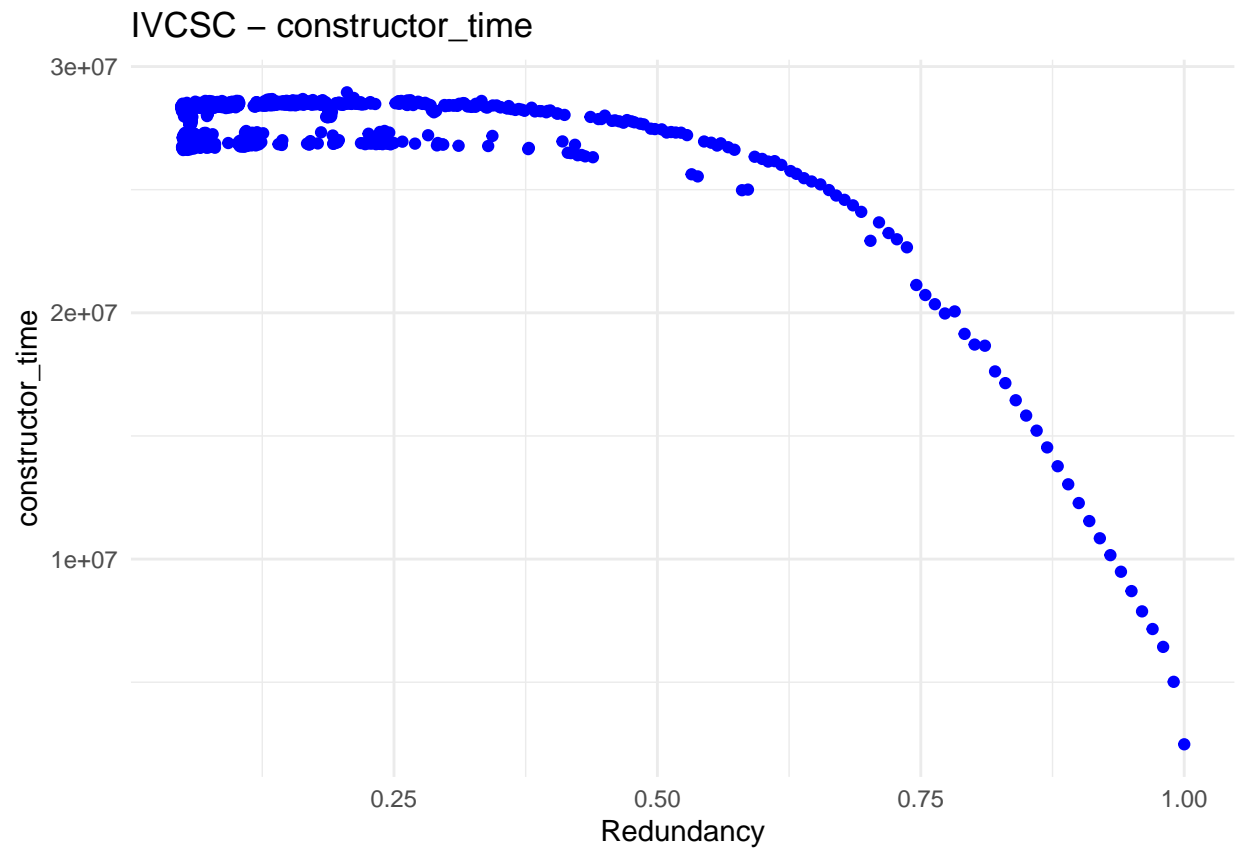


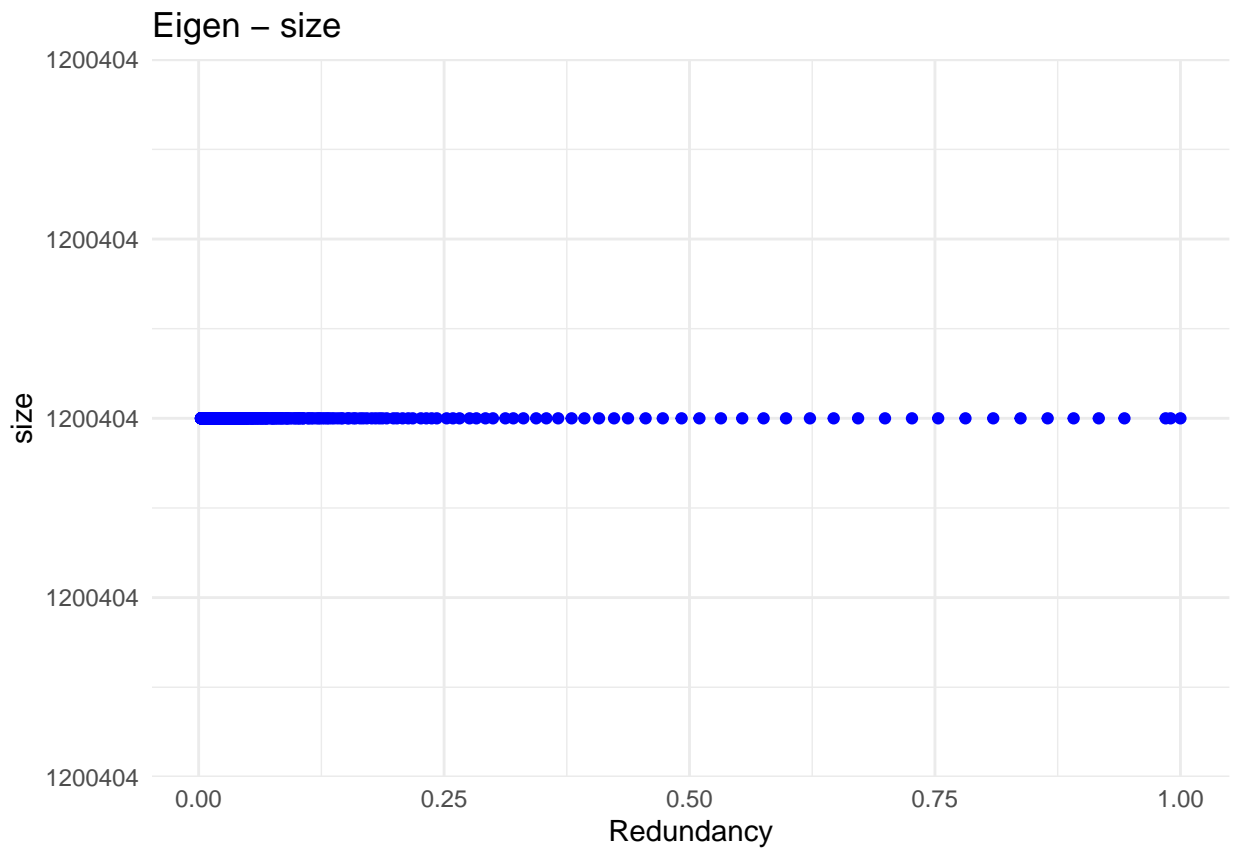


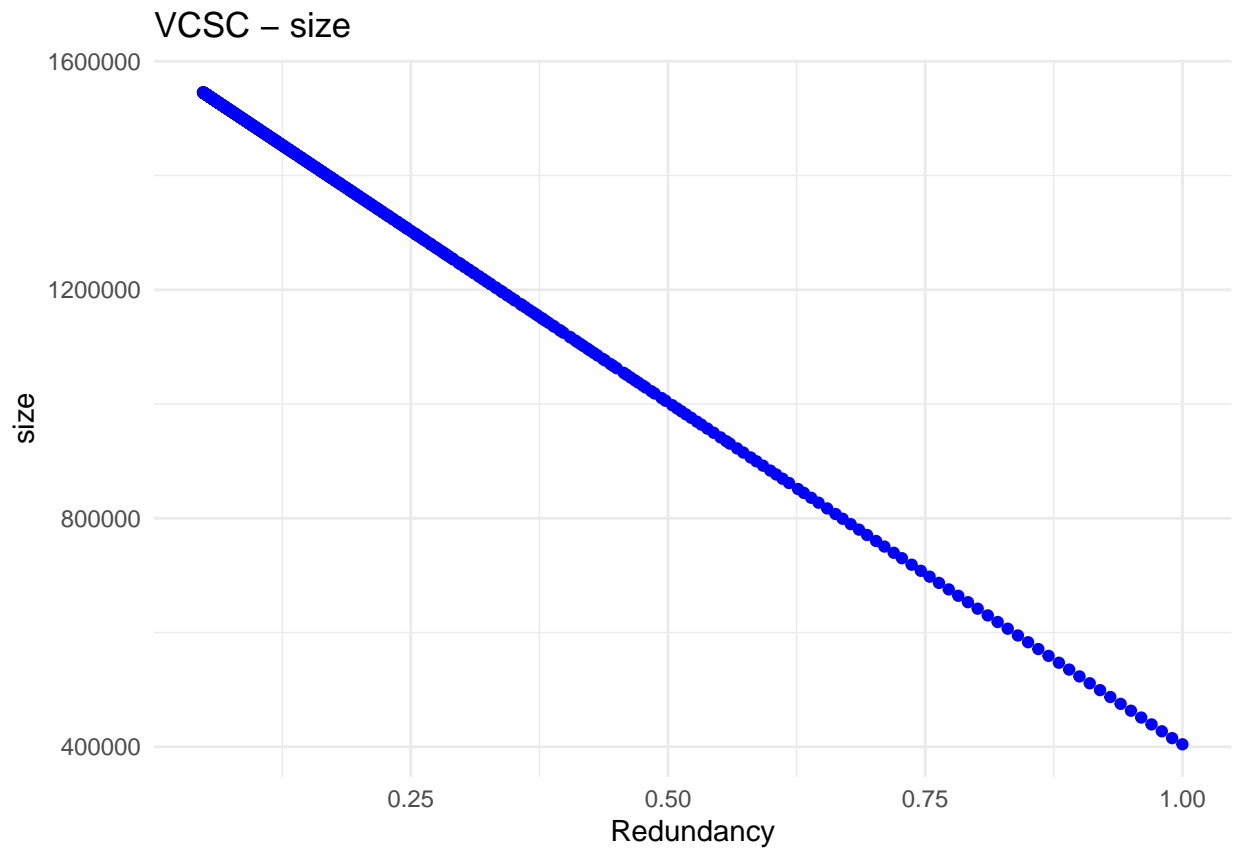


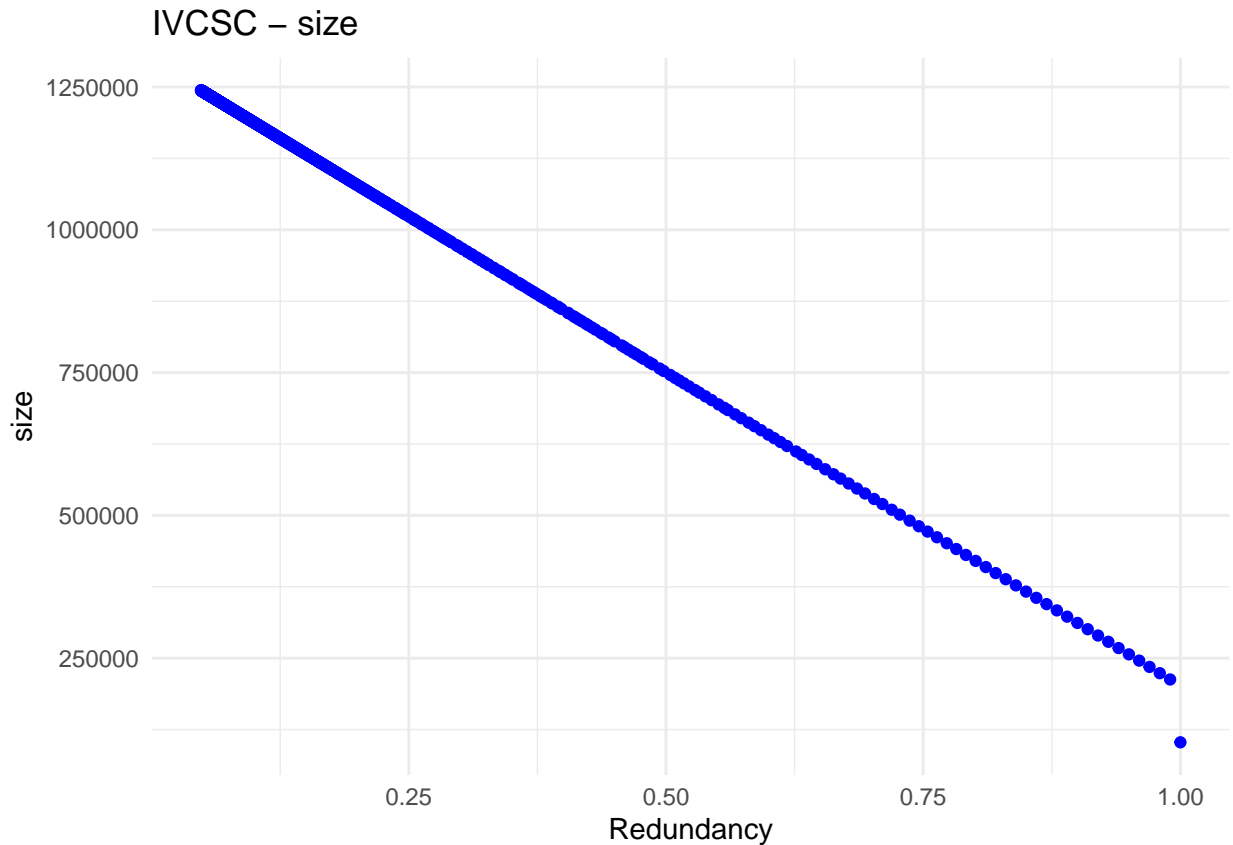






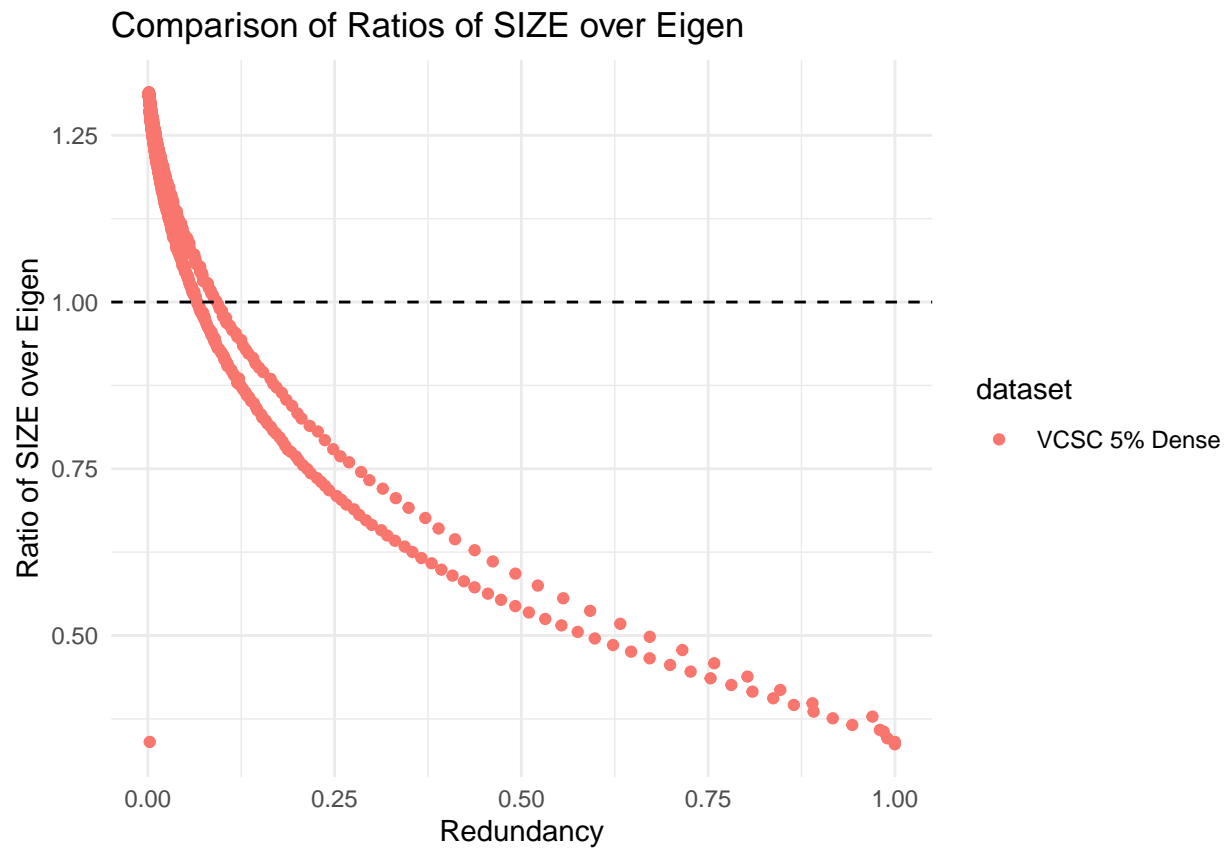






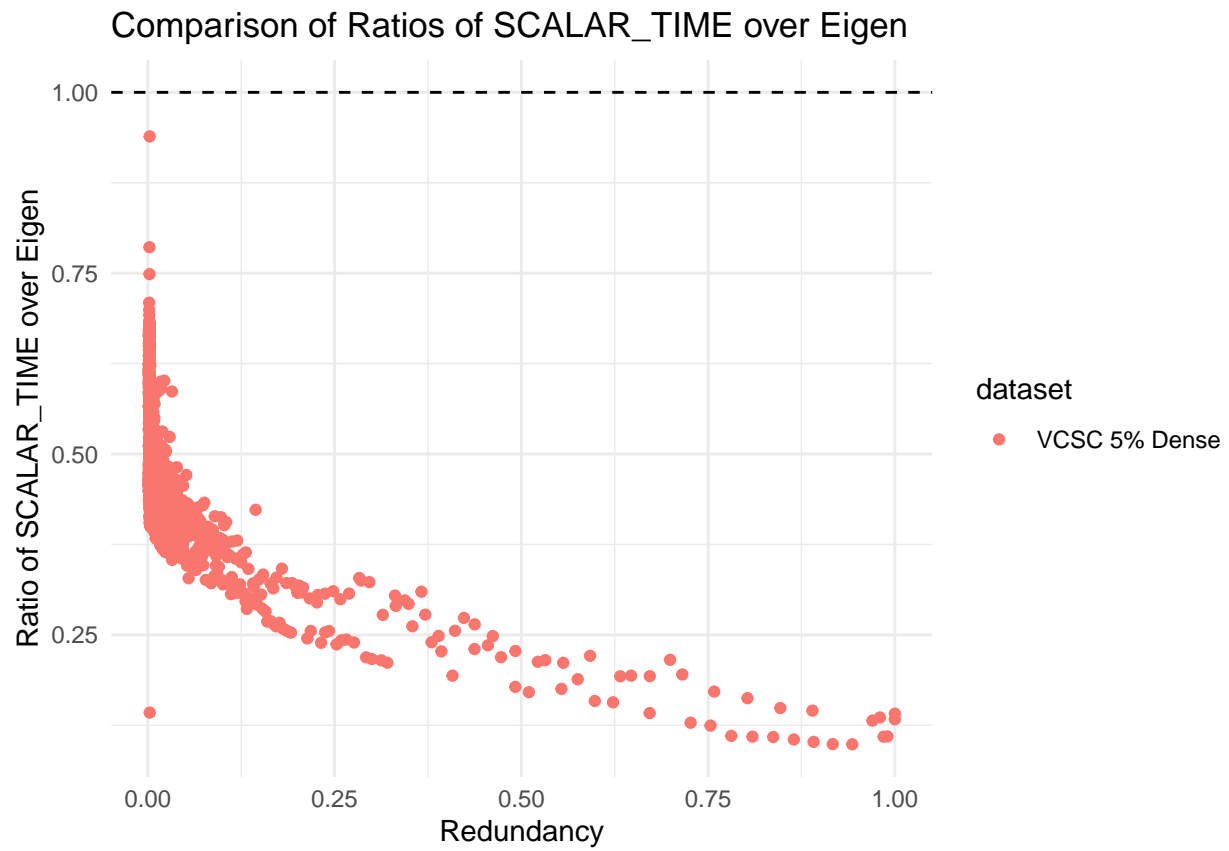
### Dual Plots Between 5% and 10% Density as a Ratio Over Eigen

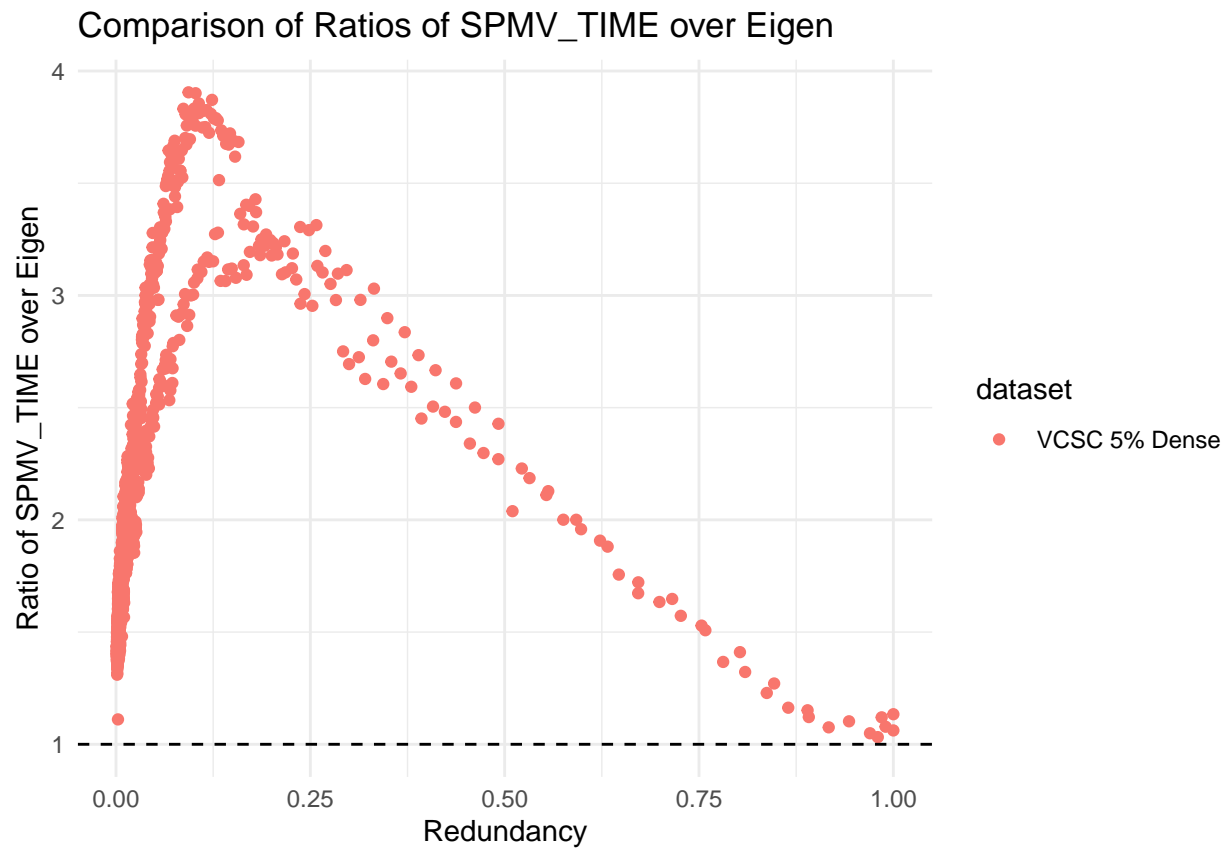
```
## Warning: Using an external vector in selections was deprecated in tidyselect 1.1.0.
## i Please use `all_of()` or `any_of()` instead.
##   # Was:
##   data %>% select(y_axis_variable)
##
##   # Now:
##   data %>% select(all_of(y_axis_variable))
##
## See <https://tidyselect.r-lib.org/reference/faq-external-vector.html>.
## This warning is displayed once every 8 hours.
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```



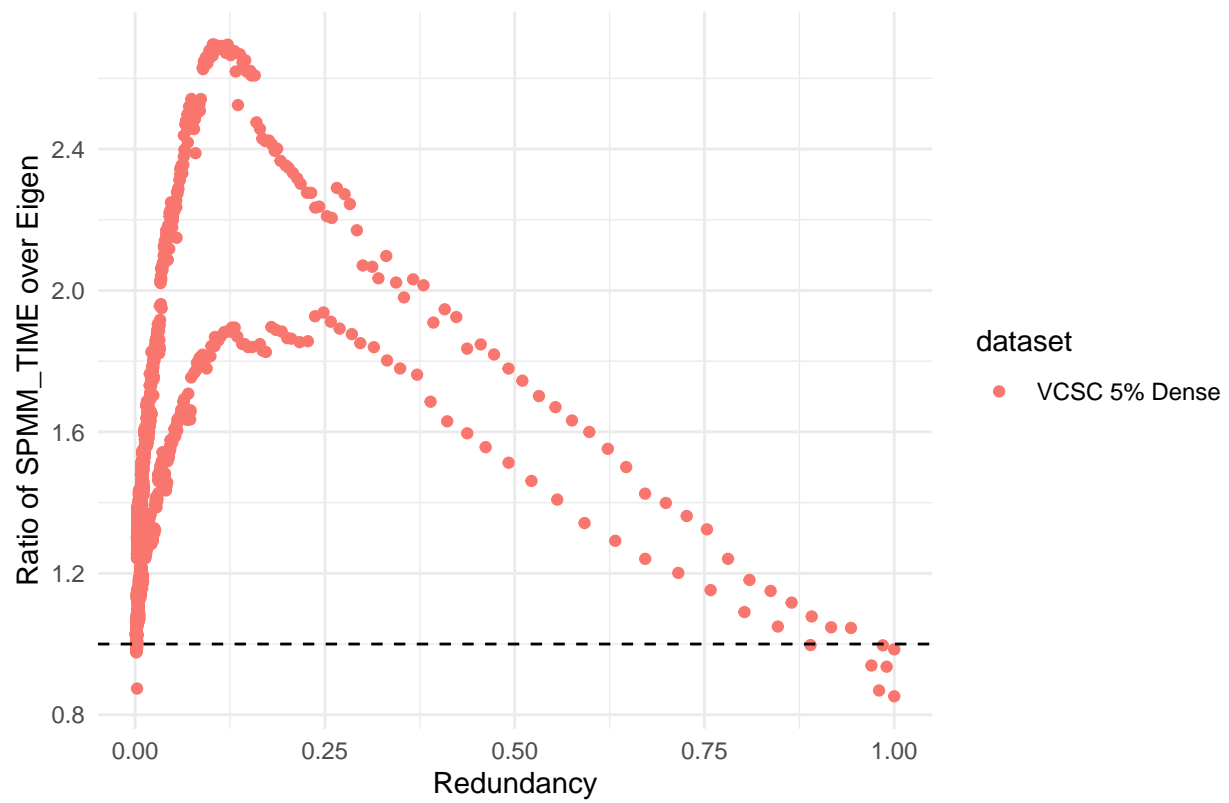


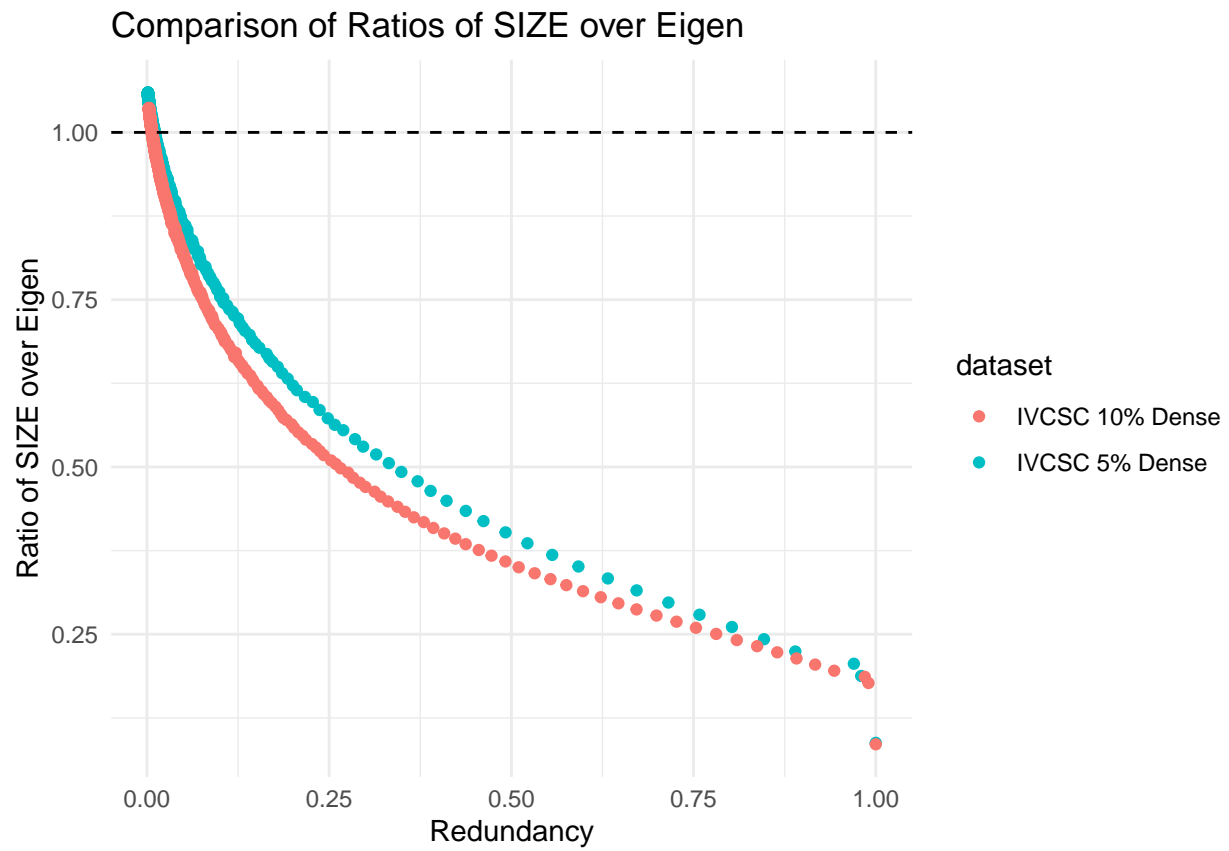


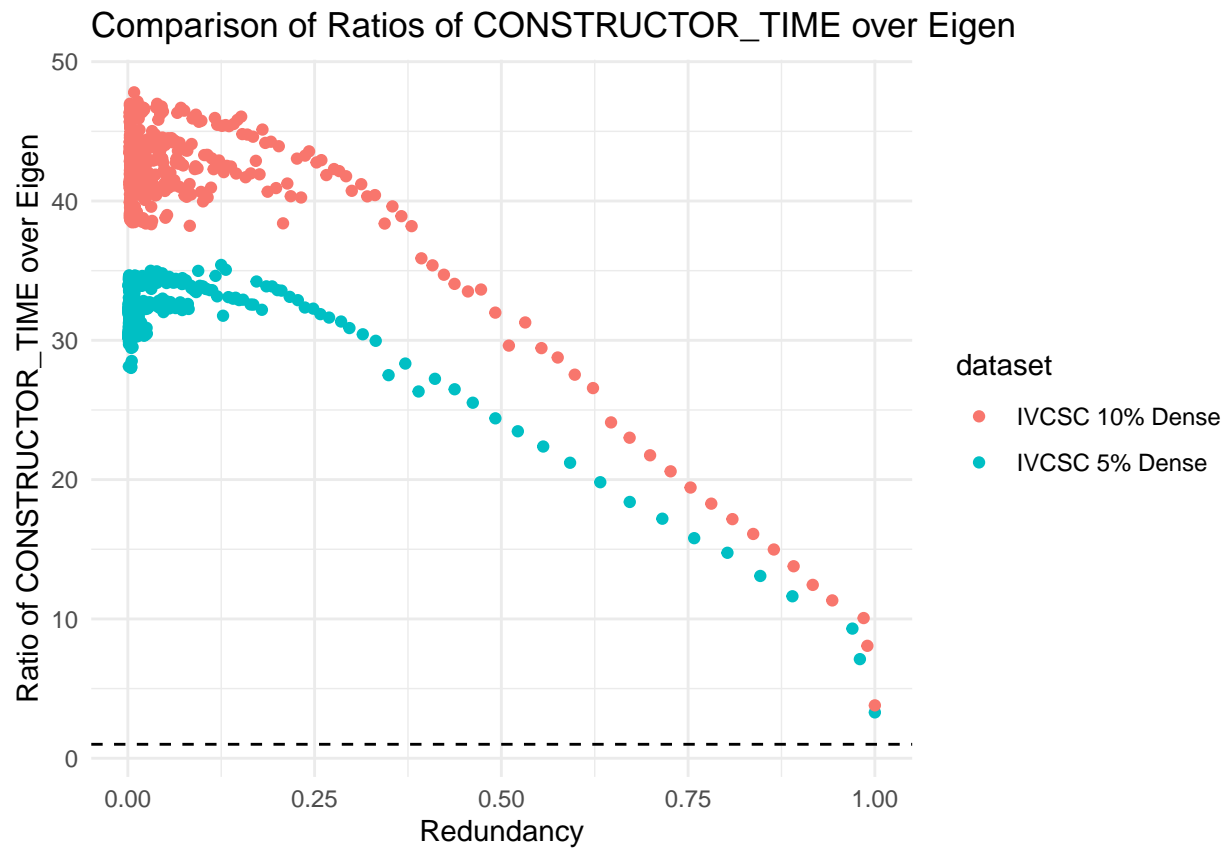




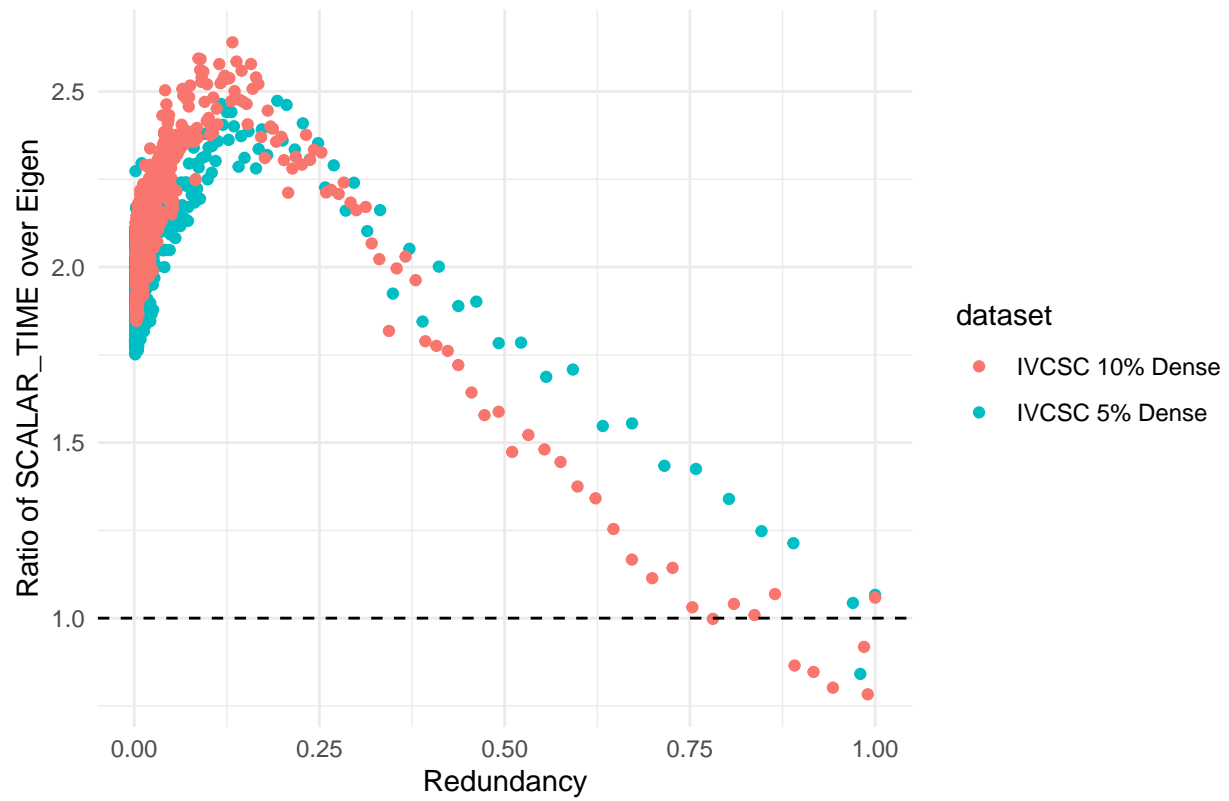
Comparison of Ratios of SPMM\_TIME over Eigen

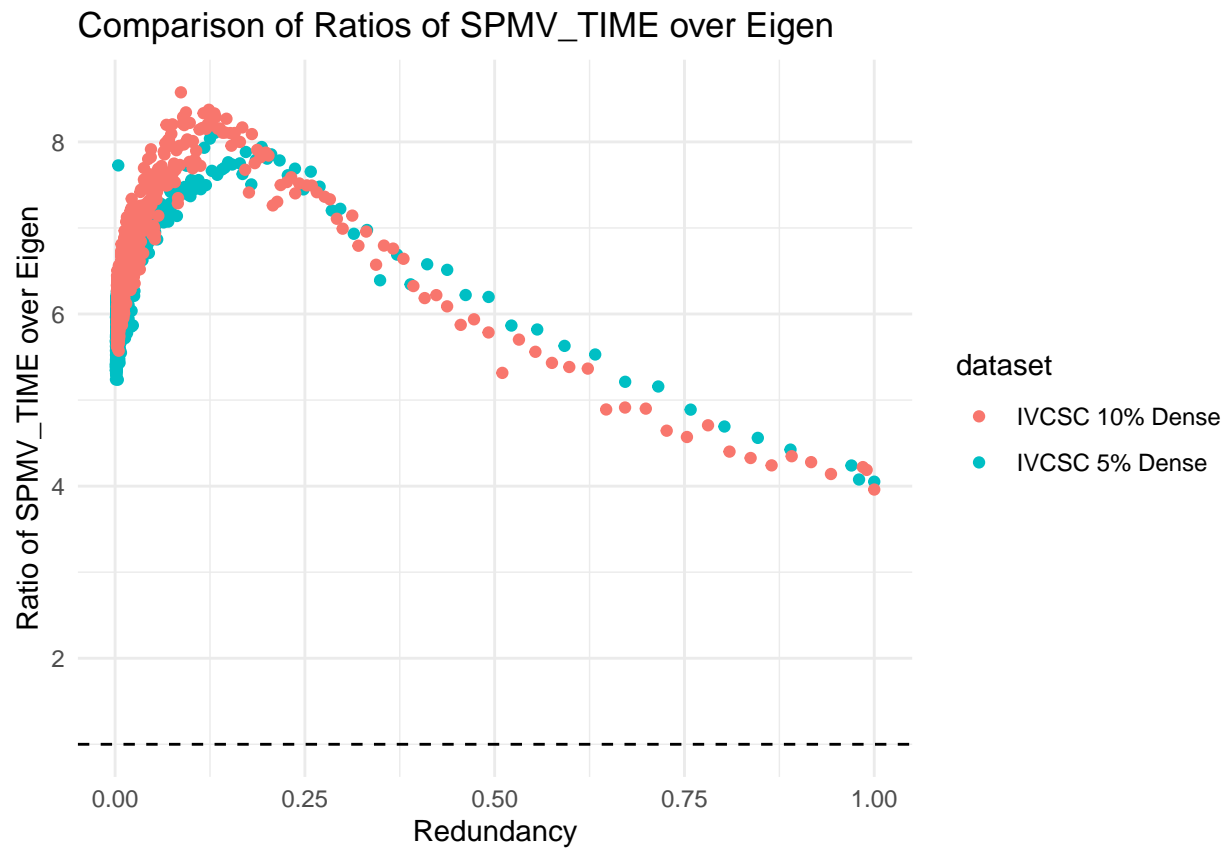




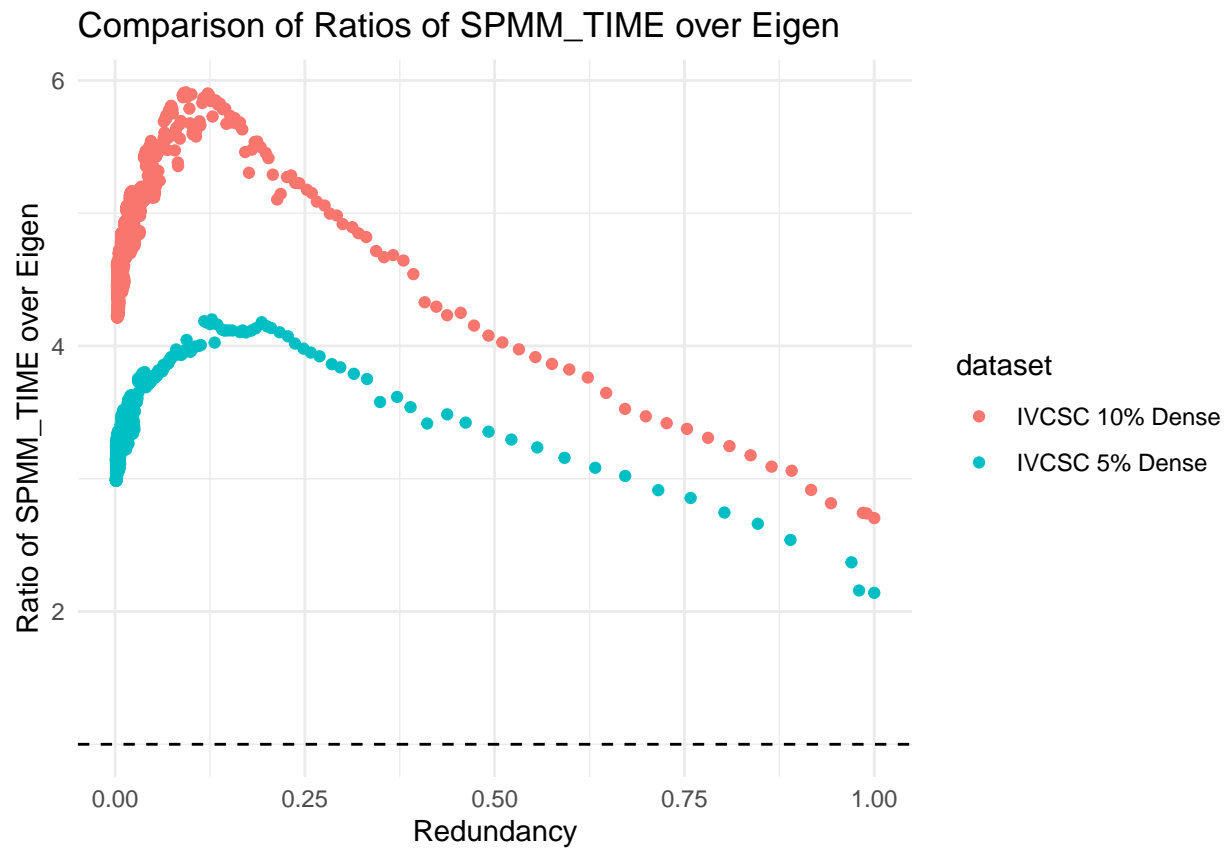


Comparison of Ratios of SCALAR\_TIME over Eigen

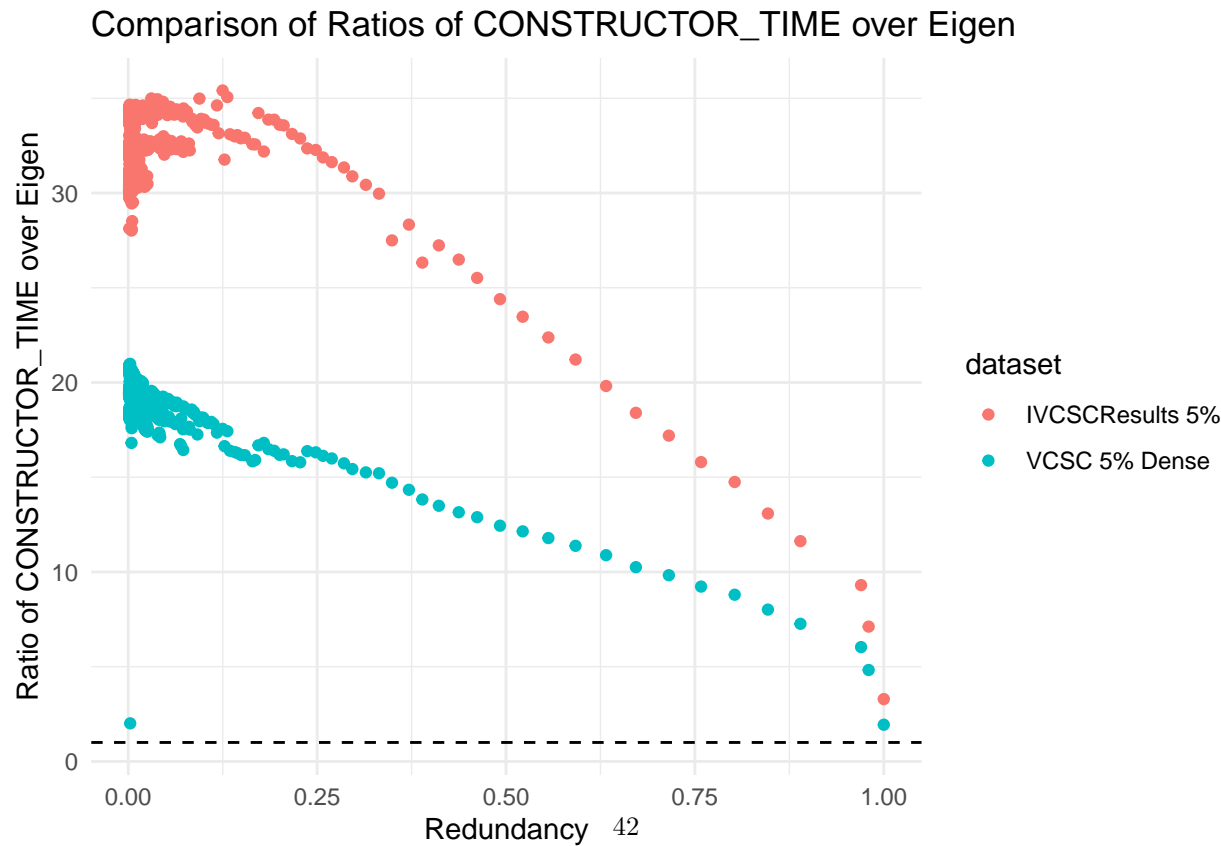
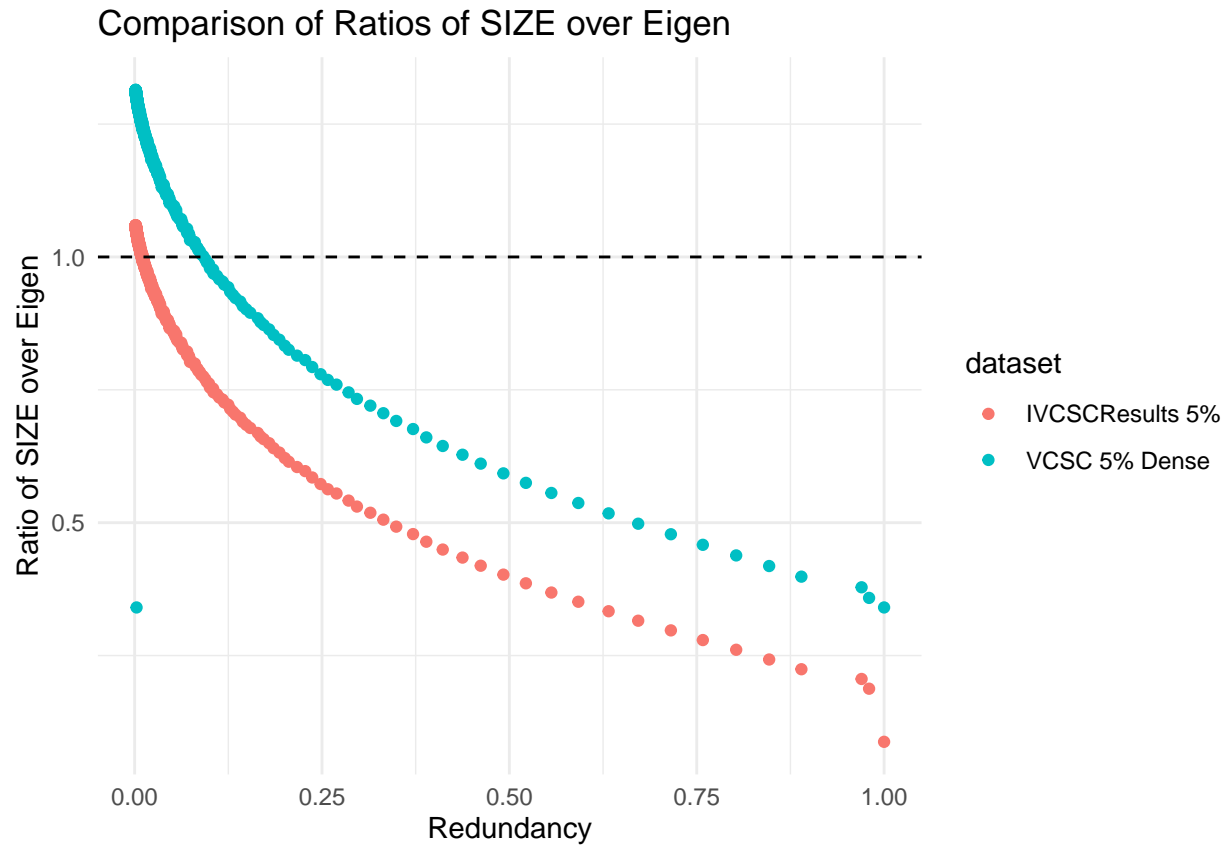




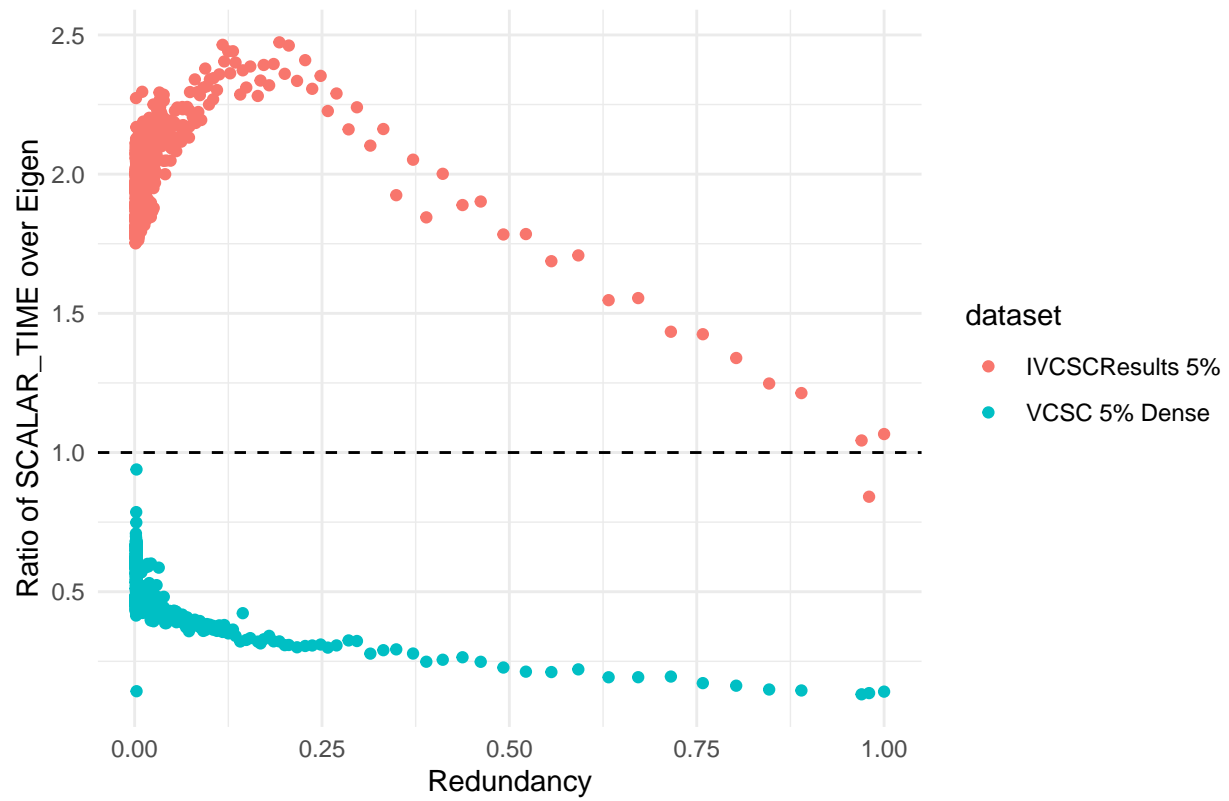


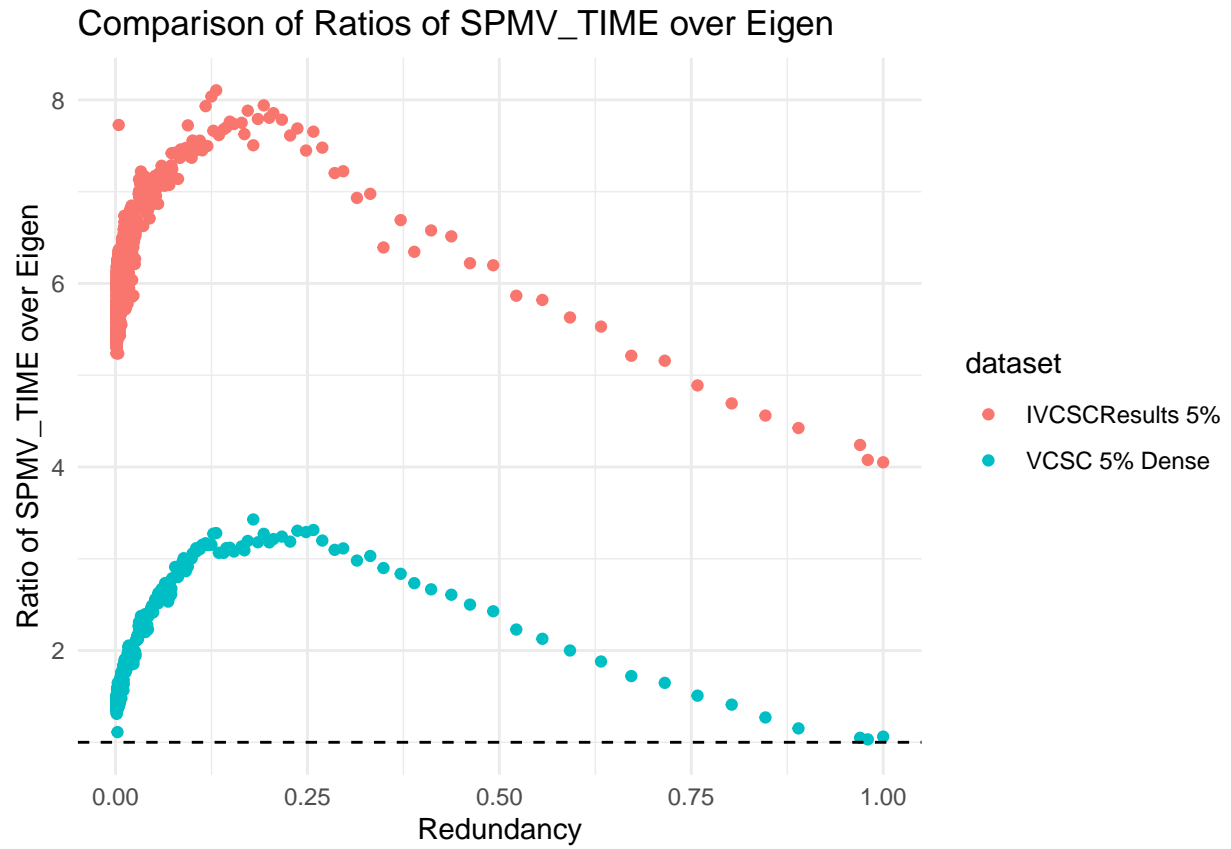


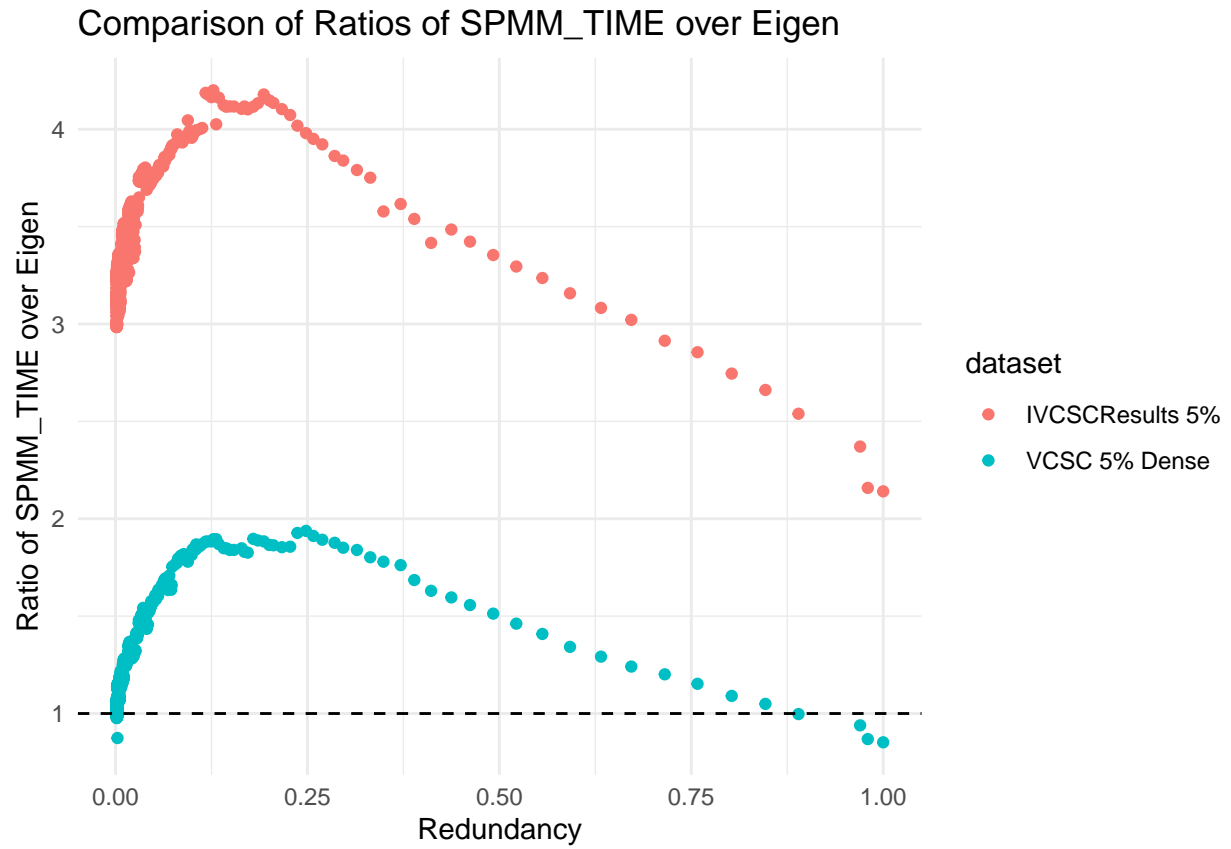
Comparisons of IVCSC and VCSC Density as a Ratio Over Eigen  
5% Dense



Comparison of Ratios of SCALAR\_TIME over Eigen

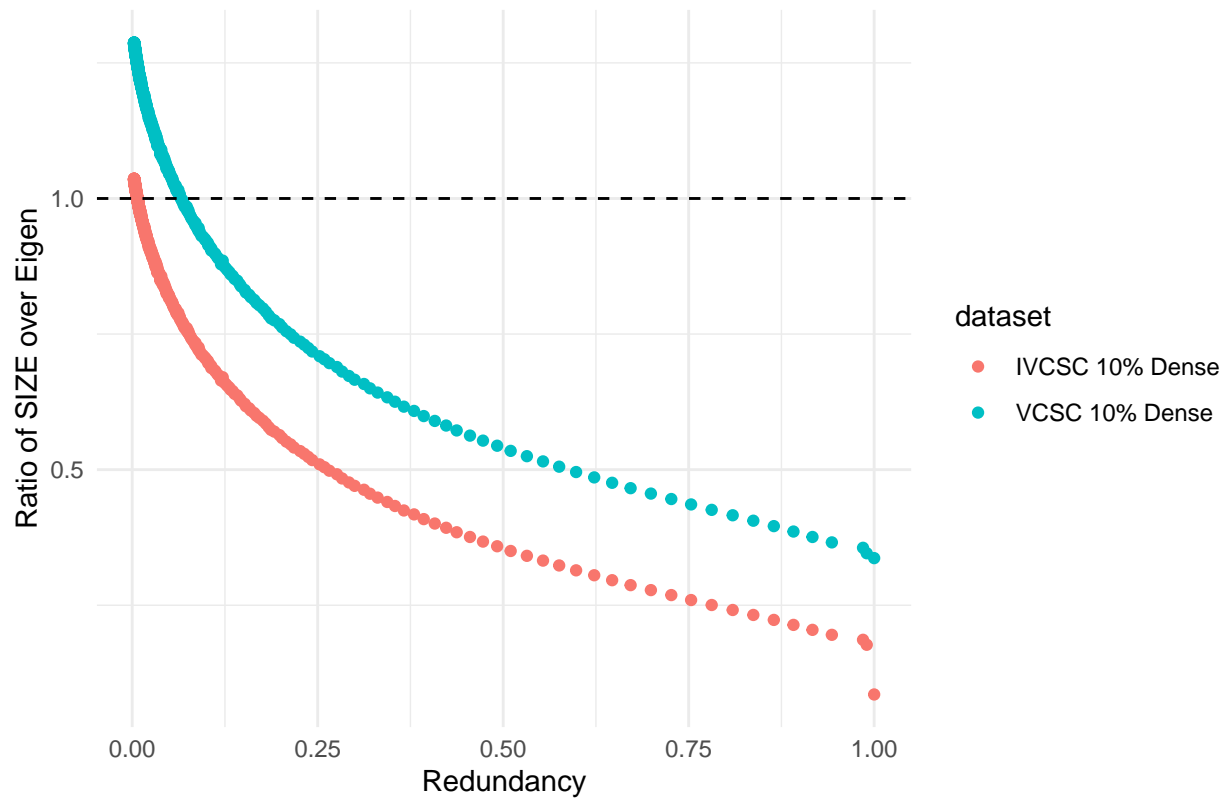




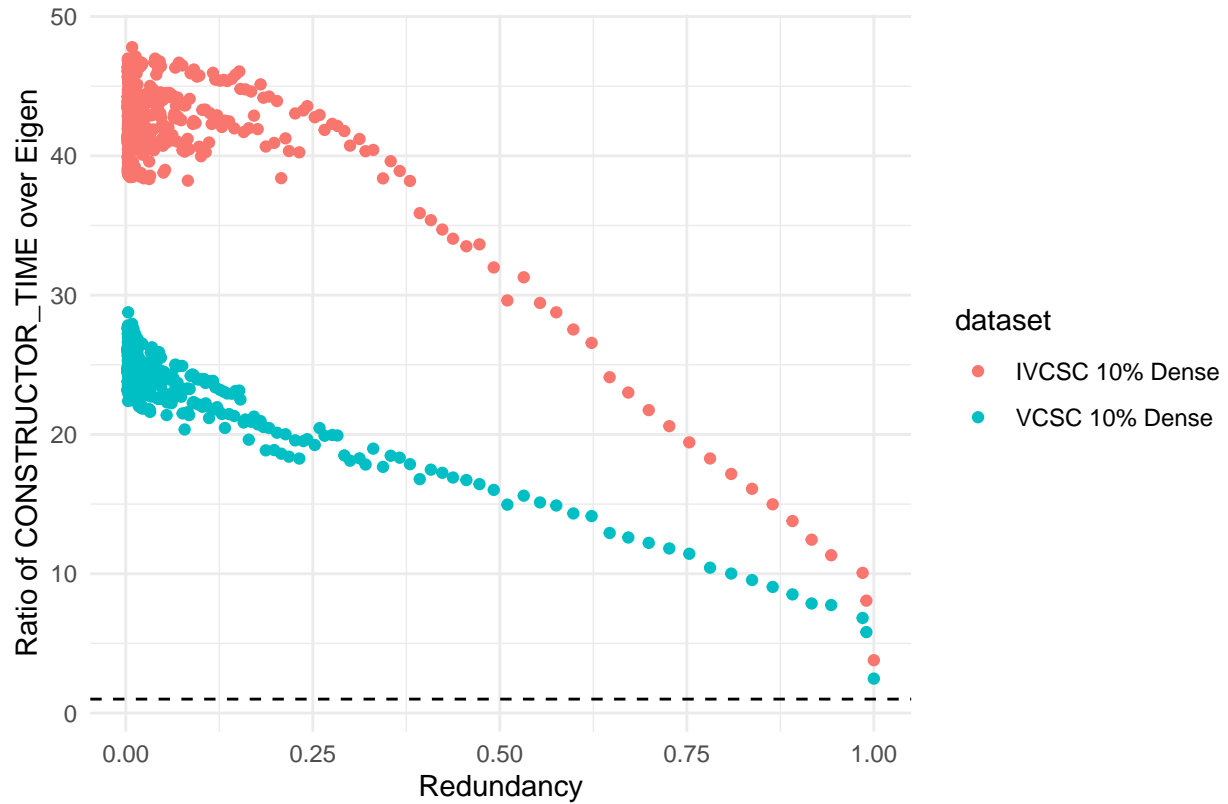


10% Dense

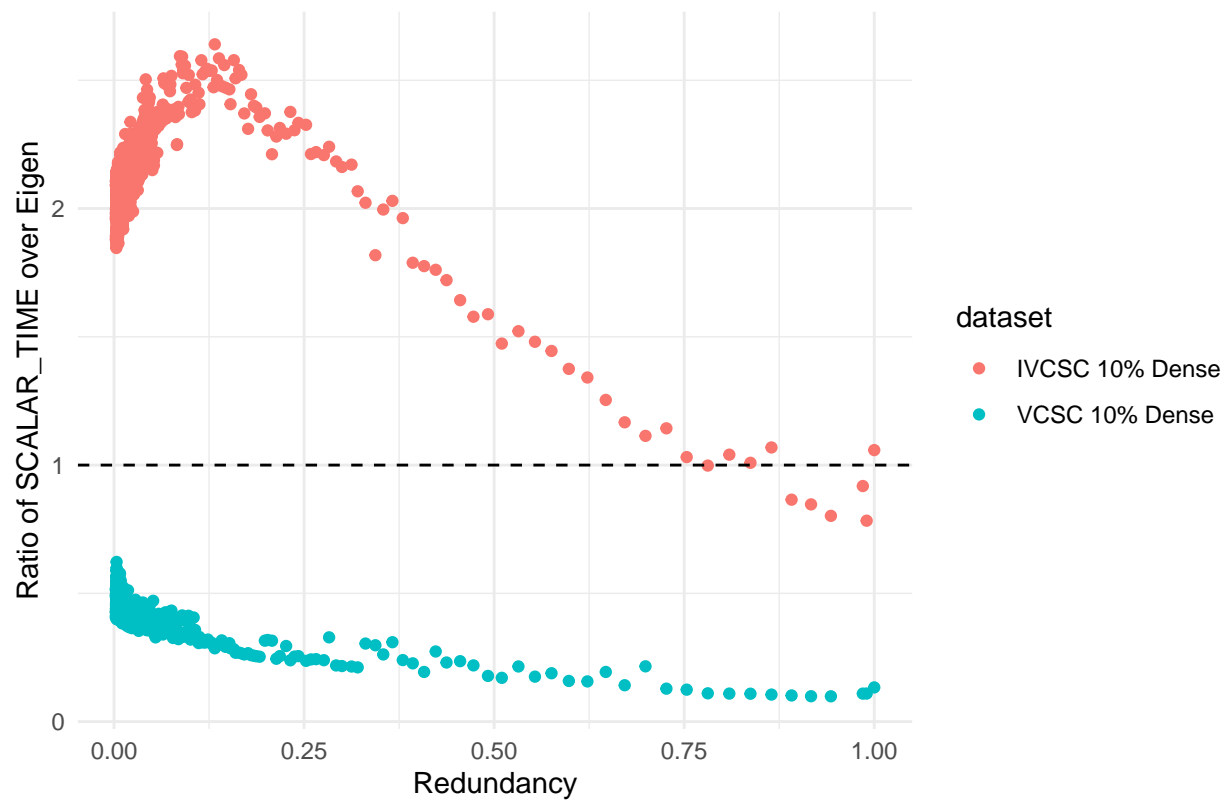
Comparison of Ratios of SIZE over Eigen



Comparison of Ratios of CONSTRUCTOR\_TIME over Eigen



Comparison of Ratios of SCALAR\_TIME over Eigen



Comparison of Ratios of SPMV\_TIME over Eigen

