# Summary

­Overall, the fastest way is to use list comprehension and store data as list of dict.

The size of our data is usually around 800 – 50 000 rows. Most of our data is between 800 – 1500 rows apart from the bg\_div data. Our data rarely goes beyond 60 000 rows.

Computation time

|  |  |  |
| --- | --- | --- |
|  | 52 000 rows | 881 rows |
| Filter with pandas df (json) | 353 ms | 12 ms |
| Filter with comprehension (json) | 172 ms | 7 ms |
| Filter with pandas df (list of dict) | 194 ms | 10 ms |
| Filter with a list (list of dict) | 126 ms | 6 ms |

Note:

* In the case of small amount of data ~1000 rows, speed of filtering using comprehension with json or list of dict is very similar.
* JSON is faster compared to list of dict in terms of data storage and network time, but more time was spent on filtering json data. JSON would stand out if there’s a more efficient way of filtering json data.

52 000 rows

* pd\_json 353
* json 172
* pd\_df 194
* lst 126

881 rows

* pd\_json 12
* json 7
* pd\_df 10/11
* lst 6/4

Question:

* Does the storage format affect network time?

# Datatables

For 881 rows

Diagram

Description automatically generated

Diagram

Description automatically generated

Changing the order in layout and callback

Diagram

Description automatically generated

Individual Comparison

Diagram

Description automatically generated

Diagram

Description automatically generated

Large, load\_bg\_div from DB

52107 rows

Diagram

Description automatically generated

Diagram

Description automatically generated

# dcc.Store

## 52107 rows

Same result, using list cpmprehension is faster for computationas, around 60 ms faster on average

Diagram

Description automatically generated

Same result as before for 881 rows, 295 rows and 2 rows

Diagram

Description automatically generated

JSON

For 881 rows

Graphical user interface, application

Description automatically generated

Diagram

Description automatically generated

Graphical user interface, application

Description automatically generated

## For 52107 rows

Diagram

Description automatically generated

Diagram

Description automatically generated

# Test component network time

# 881 rows

Result: Network time is similar for small amount of data.

JSON

(-5)

Diagram

Description automatically generated

Dict (10)

Diagram

Description automatically generated

# 52107 rows

JSON (30)

Graphical user interface, diagram

Description automatically generated

Dict (75 ms)

Graphical user interface, diagram

Description automatically generated

Speed before editing

Diagram

Description automatically generated