Diffusion-Map-recap

immediate

January 16, 2020

Contents

1 Quickstart

A short version to achive the above is by using the preprocessed version of the dataset provided with this package. `data(guo)` is already preprocessed (using the method first mentioned), has its threshold set to a constant 15 and is ready to use. Since the platform's maximum amplification cycles are 40, that number can be used as upper border of the uncertainty range.
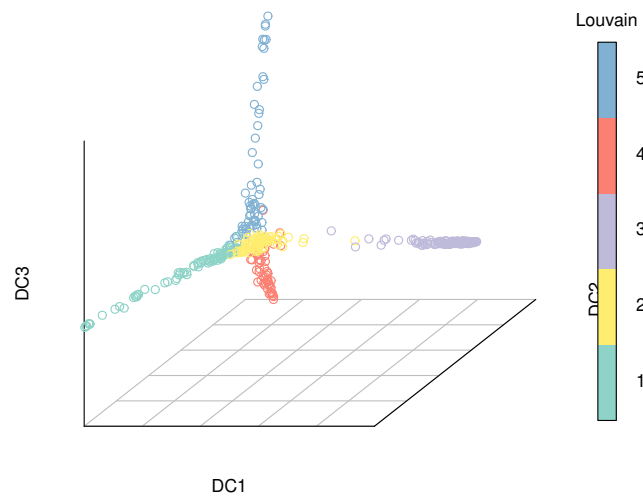
```
[2]: library(destiny)
     data(guo)
```

It can be used directly for diffusion map creation:

```
[3]: dm_guo <- DiffusionMap(guo, verbose = FALSE,
                            censor_val = 15, censor_range = c(15, 40))
     dm_guo
```

```
DiffusionMap (20 Diffusion components and 428 observations)
eigenvalues:    num [1:20] 0.954 0.846 0.798 0.776 0.703 ...
eigenvectors:   num [1:428, 1:20] -0.0576 -0.0574 -0.0495 -0.0495 -0.0511 ...
  ..colnames:   chr [1:20] "DC1" "DC2" "DC3" "DC4" ...
optimal_sigma:  num [1:428] 7.69 7.63 9.19 6.76 6.35 ...
distance:       chr "euclidean"
```

```
[4]: plot(dm_guo)
```

using the annotation shows that the approximation worked

```
[5]: palette(cube_helix(6))
     plot(dm_guo, col_by = 'num_cells',
          legend_main = 'Cell stage')
```