

# animated pdf example

Nick Spyrisson

5/10/2021

## Contents

1	Setup and gotchas	1
2	Base	1
3	tourr – only 2 frames?	2
4	ganimate	3
5	spinifex render_ganimate	4

## 1 Setup and gotchas

Keep an eye on YAML header and chunk options.

- 1) need YAML must load tex package `animate`, *ie.* `header-includes: - \usepackage{animate}`
- 2) chunk option of the animation wants: `fig.show='animate'`, `interval=1/fps` and sometimes `animation.hook='gifski'`
- 3) For `{rticles}` templates and other local templates, you may need to the following to the `template.tex` preamble:

```
$if(highlighting-macros)$  
$highlighting-macros$  
$endif$
```

## 2 Base

```
for (i in 1:3){  
  pie(c(i %% 3, 6), col = c('red', 'yellow'), labels = NA)  
}
```

### 3 tourr – only 2 frames?

```
require(tourr)
if(interactive() == T)
  ?save_history

t1 <- save_history(flea[, 1:6], max = 4)

## Converting input data to the required matrix format.
## target_dist - cur_dist: 0
## generation: dist = 1.893
## target_dist - cur_dist: 1.893
## generation: dist = 1.563
## target_dist - cur_dist: 0
## generation: dist = 1.657
## target_dist - cur_dist: 0
## generation: dist = 1.584
## target_dist - cur_dist: 0
## generation: dist = 1.762

animate_xy(flea[, 1:6], planned_tour(t1))

## Converting input data to the required matrix format.
## target_dist - cur_dist: 0
```

```
## generation:  dist =    1.657
## Using half_range 0.98
## target_dist - cur_dist: 1.657
```

```
message("why only 2 frames!?")
```

```
## why only 2 frames!?
```

## 4 gganimate

```
require(gganimate)
message("Seems to produce many intermediate frames, `interval` may not be be strightforard with gganimate")

## Seems to produce many intermediate frames, `interval` may not be be strightforard with gganimate
ggplot(datasets::airquality, aes(Day, Temp, group = Month)) +
  geom_line() +
  transition_reveal(Month)
```

## 5 spinifex render\_gganimate

```
require(spinifex)
message("only works with an implicit call, but not with animate(), difference with print.gganim() and knitr::kable_gganim()")

## only works with an implicit call, but not with animate(), difference with print.gganim() and knitr::kable_gganim()
##?play_tour_path
dat_std <- scale_sd(flea[, 1:6])
clas <- flea$species
bas <- basis_pca(dat_std)

## Not run:
## Tour history from tourr::save_history
g_path <- tourr::save_history(dat_std, tour_path = tourr::grand_tour(), max = 3)

## target_dist - cur_dist: 0
## generation: dist = 1.809
## target_dist - cur_dist: 1.809
## generation: dist = 1.427
## target_dist - cur_dist: 0
## generation: dist = 1.421
## target_dist - cur_dist: 0
## generation: dist = 1.548
```

```

## Recreate play_tour_path(render_gganimate)
gg <- play_tour_path(tour_path = g_path, data = dat_std, render_type = render_)

## target_dist - cur_dist: 0
## generation: dist = 1.421
## target_dist - cur_dist: 1.421
## target_dist - cur_dist: 1.371
## target_dist - cur_dist: 1.321
## target_dist - cur_dist: 1.271
## target_dist - cur_dist: 1.221
## target_dist - cur_dist: 1.171
## target_dist - cur_dist: 1.121
## target_dist - cur_dist: 1.071
## target_dist - cur_dist: 1.021
## target_dist - cur_dist: 0.971
## target_dist - cur_dist: 0.921
## target_dist - cur_dist: 0.871
## target_dist - cur_dist: 0.821
## target_dist - cur_dist: 0.771
## target_dist - cur_dist: 0.721
## target_dist - cur_dist: 0.671
## target_dist - cur_dist: 0.621
## target_dist - cur_dist: 0.571
## target_dist - cur_dist: 0.521
## target_dist - cur_dist: 0.471
## target_dist - cur_dist: 0.421
## target_dist - cur_dist: 0.371
## target_dist - cur_dist: 0.321
## target_dist - cur_dist: 0.271
## target_dist - cur_dist: 0.221
## target_dist - cur_dist: 0.171
## target_dist - cur_dist: 0.121
## target_dist - cur_dist: 0.07098
## target_dist - cur_dist: 0.02098
## generation: dist = 1.548
## target_dist - cur_dist: 1.548
## target_dist - cur_dist: 1.498
## target_dist - cur_dist: 1.448
## target_dist - cur_dist: 1.398
## target_dist - cur_dist: 1.348
## target_dist - cur_dist: 1.298
## target_dist - cur_dist: 1.248
## target_dist - cur_dist: 1.198
## target_dist - cur_dist: 1.148
## target_dist - cur_dist: 1.098
## target_dist - cur_dist: 1.048
## target_dist - cur_dist: 0.998
## target_dist - cur_dist: 0.948
## target_dist - cur_dist: 0.898
## target_dist - cur_dist: 0.848
## target_dist - cur_dist: 0.798
## target_dist - cur_dist: 0.748
## target_dist - cur_dist: 0.698
## target_dist - cur_dist: 0.648

```

```
## target_dist - cur_dist: 0.598
## target_dist - cur_dist: 0.548
## target_dist - cur_dist: 0.498
## target_dist - cur_dist: 0.448
## target_dist - cur_dist: 0.398
## target_dist - cur_dist: 0.348
## target_dist - cur_dist: 0.298
## target_dist - cur_dist: 0.248
## target_dist - cur_dist: 0.198
## target_dist - cur_dist: 0.148
## target_dist - cur_dist: 0.09802
## target_dist - cur_dist: 0.04802

gg + gganimate::transition_states(frame, transition_length = 0L)
```

```
#gganimate::knit_print.gganim(gga)
```