# Ziggy R script

```
R version 3.5.0 (2018-04-23)
Platform: x86_64-apple-darwin15.6.0 (64-bit)
Running under: OS X El Capitan 10.11.6

Matrix products: default
BLAS: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRblas.0.dylib
LAPACK: /Library/Frameworks/R.framework/Versions/3.5/Resources/lib/libRlapack.dylib

locale:
[1] en_US.UTF-8/en_US.UTF-8/en_US.UTF-8/C/en_US.UTF-8/en_US.UTF-8

attached base packages:
[1] stats     graphics  grDevices utils     datasets  methods   base

loaded via a namespace (and not attached):
 [1] compiler_3.5.0  tools_3.5.0     htmltools_0.3.6 pillar_1.3.1    rstudioapi_0.7  tibble_2.1.1
 [7] yaml_2.2.0      crayon_1.3.4    Rcpp_1.0.1      rmarkdown_1.12  knitr_1.22      xfun_0.6
[13] digest_0.6.18   pkgconfig_2.0.2 rlang_0.3.4     evaluate_0.14
```

## Packages used

```
[[1]]
 [1] "evaluate"     "animation"    "RColorBrewer" "dplyr"        "ggmap"        "RgoogleMaps"
 [7] "sp"           "maptools"     "scales"       "rgdal"        "ggplot2"      "leaflet"
[13] "jsonlite"     "readr"        "devtools"     "mapdata"      "ggsn"         "mapview"
[19] "mapproj"      "ggthemes"     "reshape2"     "grid"
```

## Script

```
# read in data ------------------------------------------------------------
countries <- c("Colombia","Ecuador","Peru","Panama")
# read in kml data from my google maps (drive route)
zp <- sf::st_read("ziggy.kml")
secondary_paths <- sf::st_read("secondary_paths.kml")
# get city coords
city_df <- c()
for(ll in 2:length(zp$Name)){
  city <- unlist(subset(zp,Name==as.character(zp$Name[ll]))$geometry)
  city <- city[2:1] # remove stupid zero
  city_df <- rbind(city_df,city)
  city_df <- city_df %>% data.frame()
}
colnames(city_df) <- c("lat","lon")
# high res map
d <- map_data("worldHires", countries)
# get latlon (uses api key)
location <- c("Medellin","Bogotá")
city_secondary <- geocode(location,
                          output = "latlon",
                          source="google"
                          )
city_secondary <- city_secondary %>% data.frame()
# plot --------------------------------------------------------------------
dput(par(no.readonly=TRUE)) # reset graphical params
par()
# colour palettes
bg <- "#f2f0ee"
fg <- "#10163c"
path_col <- "#f4d29f"
border_col <- "c7d2f5"
city_size <- 5
path_size <- 0.7
# plot
ggplot() + # initiate plot dev
  geom_polygon(data=d,aes(x=long, y=lat, group = group),
               fill = fg, col=border_col,size=0.1) + # add map polygon
  geom_sf(data=zp,color=path_col,size=path_size) + # add ziggy path
  geom_point(data=city_df,aes(lon,lat),
             col=path_col,size=city_size) + # add cities
  geom_point(data=city_secondary,aes(lon,lat),shape=21,
             fill=path_col,color=path_col,size=city_size) + # add secondary cities
  coord_sf(xlim=c(-75,-81),ylim=c(-2,8)) + # zoom window
  theme_nothing() + # set minimal theme
  theme( # panels
    panel.grid.major = element_line(colour = bg),
    panel.ontop = F, # to toggle panel grid visibility
    plot.background = element_rect(fill = bg))
# save to dir
ggsave(paste0("ziggy_",bg,"_",fg,"_",path_col,".pdf")
       , width = 9, height = 15, dpi = "retina", limitsize = F)
```