```r
#caartogram
#need to install cartogram, sf, and rnatural
#install.packages(c("ggplot2", "cartogram", "sf", "rnaturalearth", "rnaturalearthdata"))
library(ggplot2)
library(cartogram)
library(sf)
library(rnaturalearth)


#world data
world <- ne_countries(scale = "medium", returnclass = "sf")

world_proj <- st_transform(world, crs = 3395)

#cartogram sample w/ pop
world_cartogram <- cartogram_cont(world_proj, "pop_est", itermax=5)

#cartogram pop
ggplot(data = world_cartogram) +
  geom_sf(aes(fill = pop_est)) +
  scale_fill_gradient(low = "maroon", high = "pink") +
  theme_minimal()
```