



# Compare locations/events with geobubble charts using leaflet



# Compare locations (or events) with geobubble charts with {leaflet}

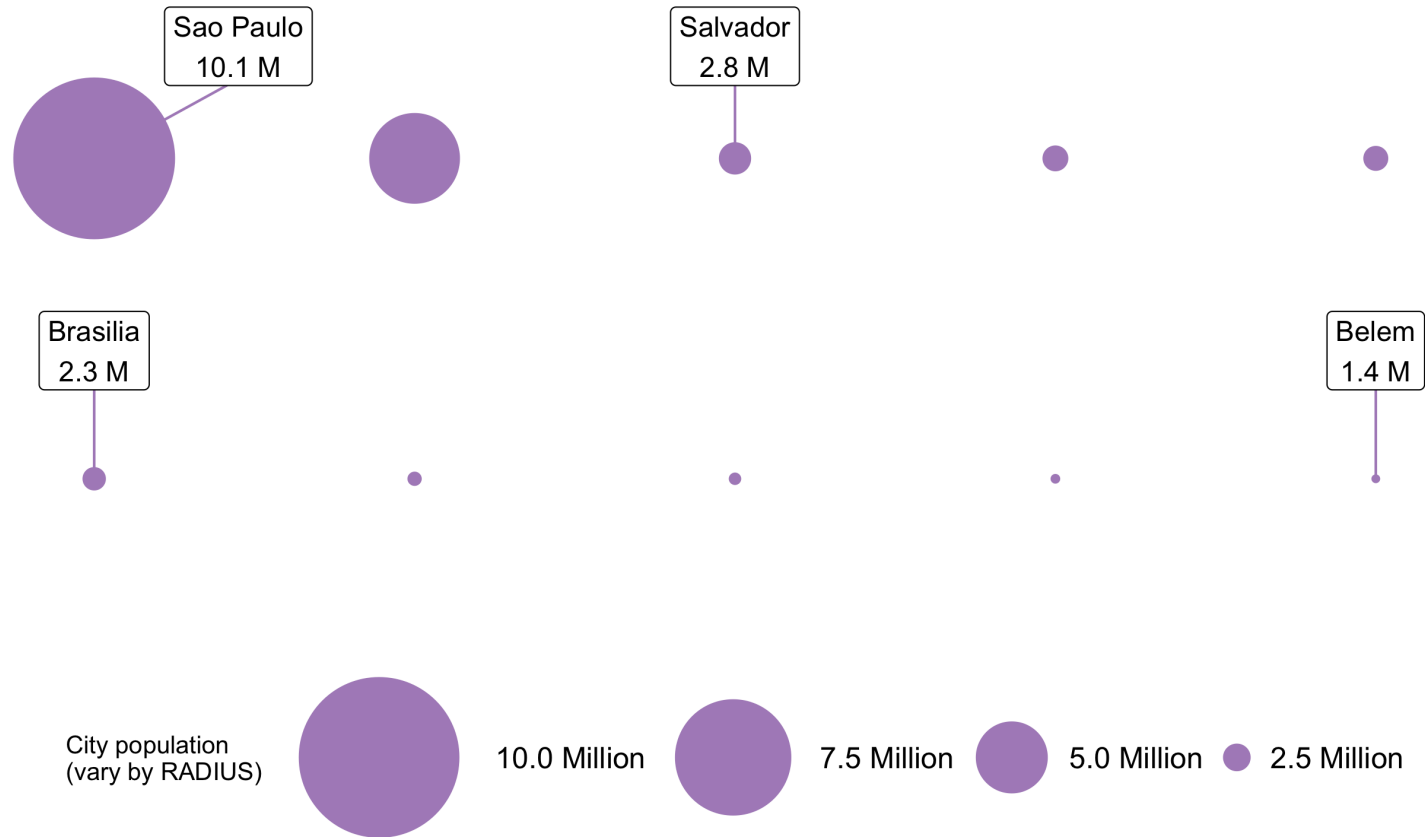


# Geobubble charts



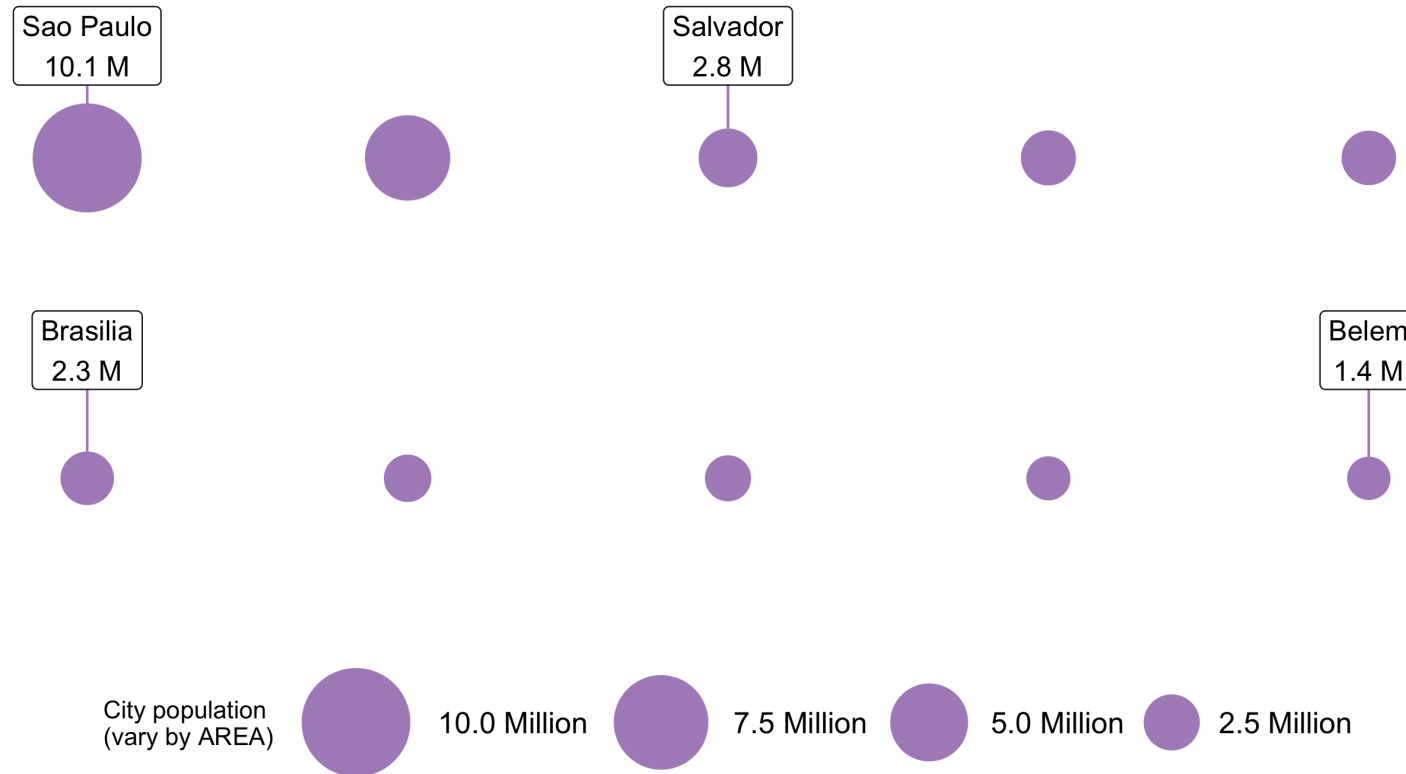


# Bubbles don't scale well by radius





# Bubbles should be scaled by area





# We need to do maths ourselves

```
scale_bubble <- function(population) {  
  sqrt(x) * scale_factor  
}  
  
... %>%  
  addCircleMarkers(radius = ~scale_bubble(pop))
```



# My turn

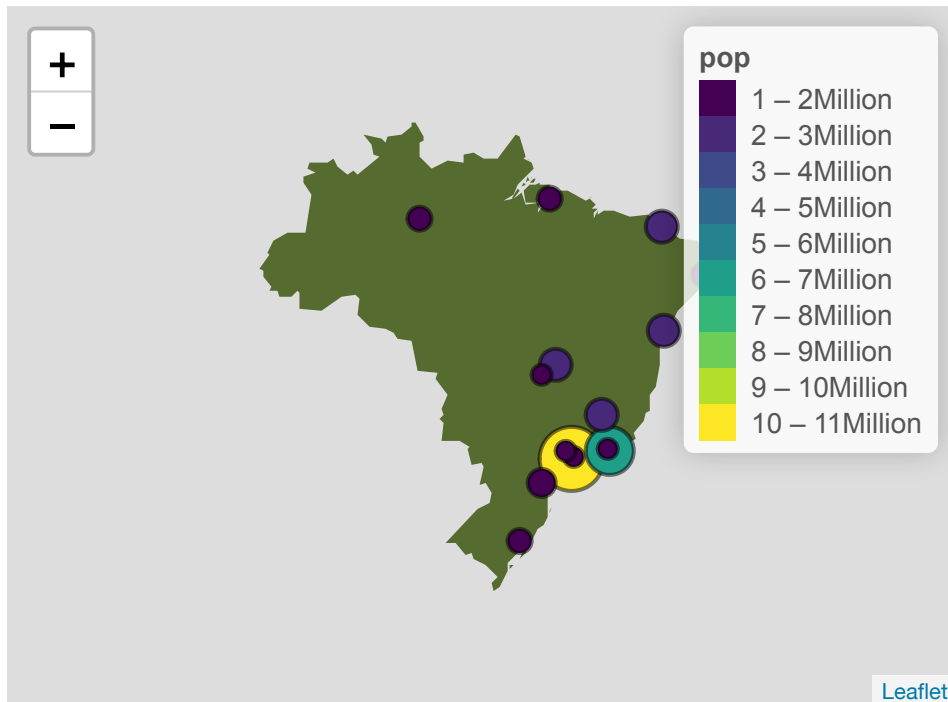
I'm going to recreate this geobubble chart.



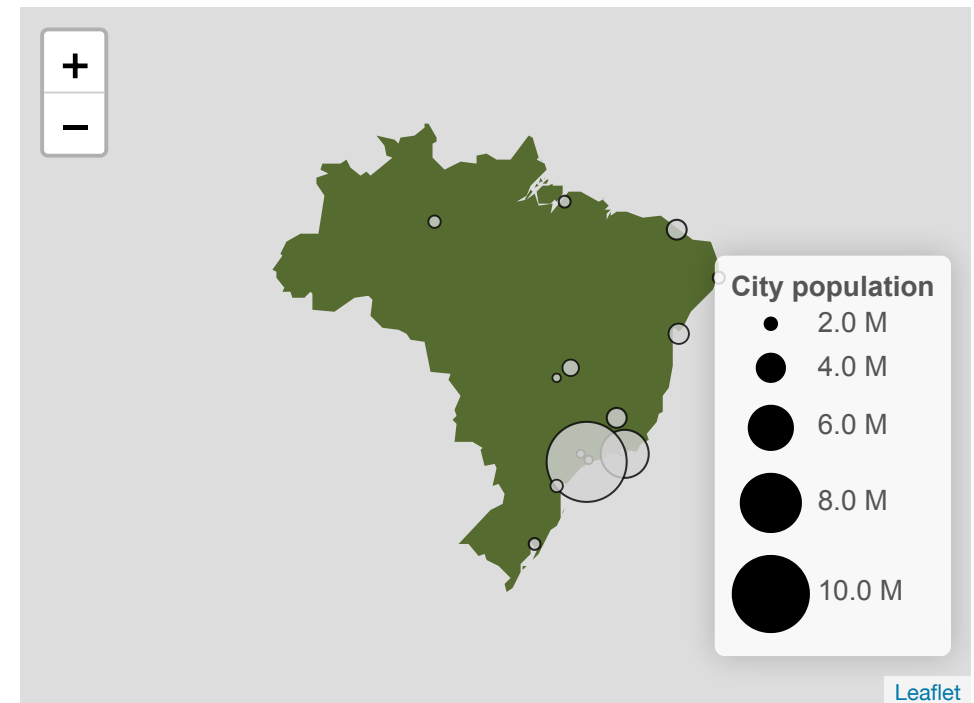


# What about legends?

The `{leaflet}` package doesn't contain a size scale legend.



The `{leafletlegend}` package adds size scale legend

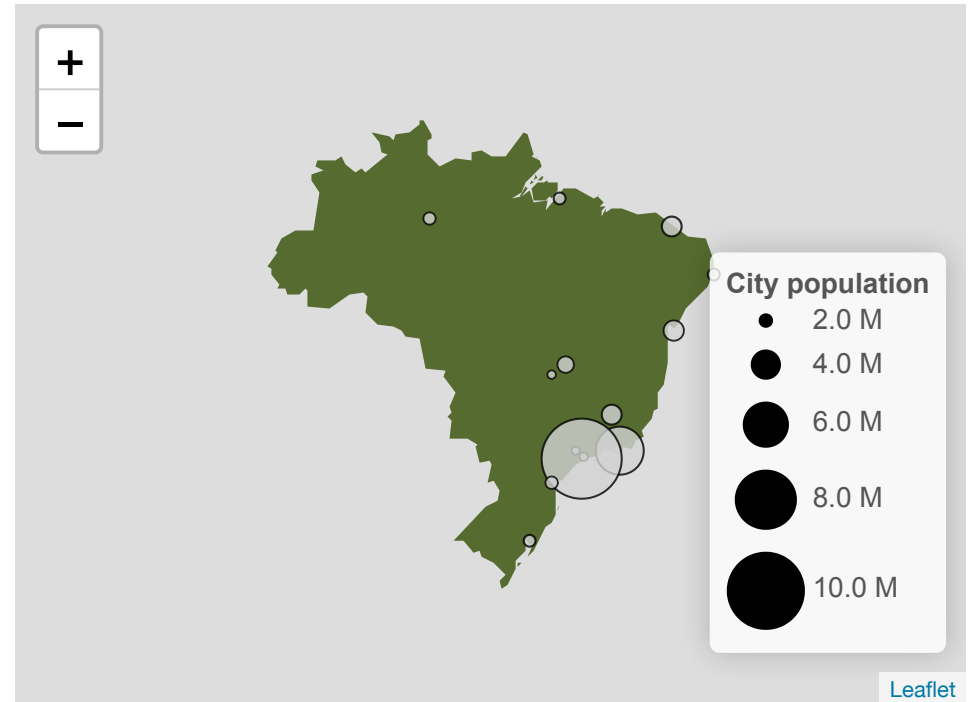






# Issues with {leaflet}

- The order of points cannot be changed for smaller cities to show on top.
- The bubble sizes change anyway when the user zooms





# Your turn

Use the `your-turn.R` script in 03\_05 to create this geobubble chart of the busiest airports in the US.

- Ensure small circles are not overlapped by bigger circles
- Give the circles both a fill color and border color
- Add a label to each airport

