Linguistic Data Analysis - Final Project

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Everything related to this project can be found in this GitHub repository.

Introduction

On the Australian continent there are over 333 reported languages which can be roughly categorized into either Pama-Nyungan languages or Non-Pama-Nyungan languages. It is important to note that the latter does not imply any genealogical link of the included languages, while the former has been shown as a cohesive language family. Non-Pama-Nyungan is more of a collective term for Australian languages that aren't thought of as Pama-Nyungan. Exactly which langauges belong to which category is an ongoing debate.

Pama-Nyungen languages have been spoken for over 5000 years, make up over 306 different identified languages and the speakers cover about 80% of the landmass (Bouckaert 2018, 741). Given this long history, it is likely that the Pama-Nyungan languages have been competing against Non-Pama-Nyungan languages for a long time and ended up limiting the Non-Pama-Nyungan languages to the northernmost part of the continent. Nowadays, both are having to compete against the English language.

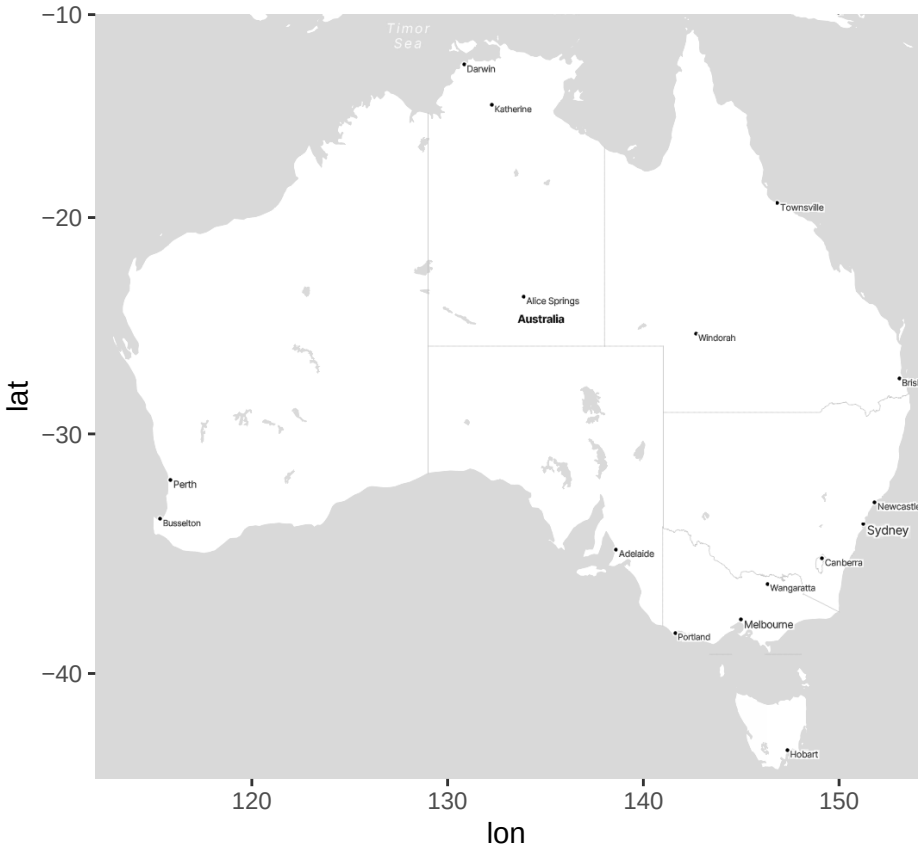
Data Wrangling

The data wrangling for this project was relatively simple, since the datasets provided by WALS and phoible respectively are quite clean already. I created a few different subsets of data which are used for specific tasks.

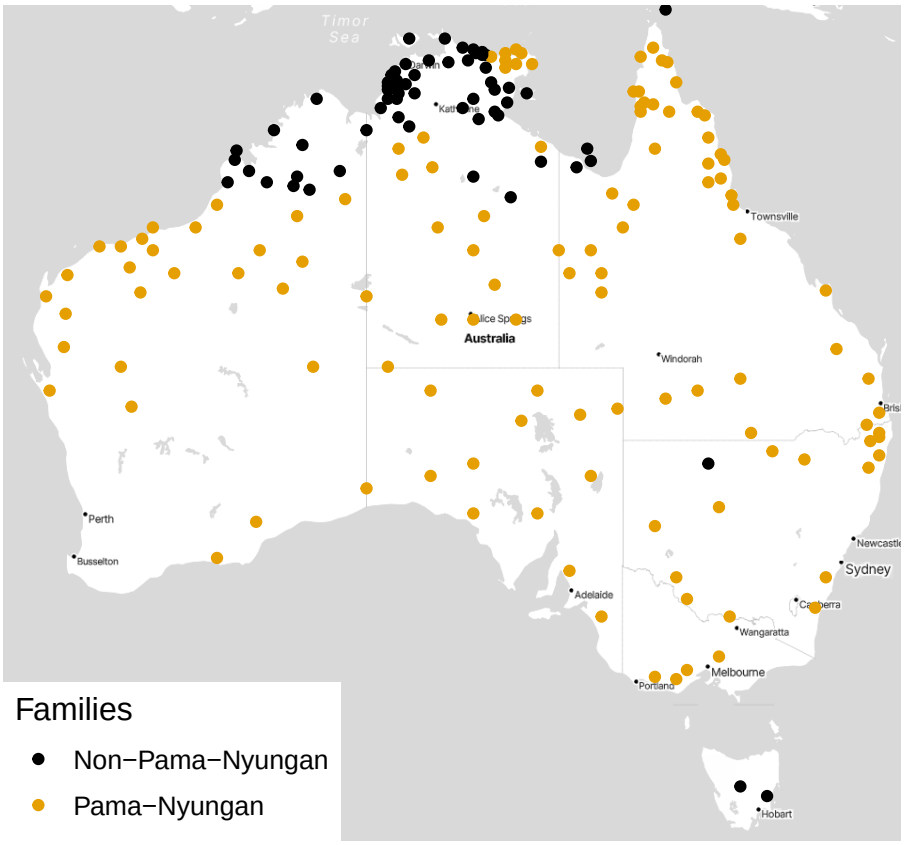
```
map_AUS <- get_stadiamap(bbox = c(left = 112,
                                  bottom = -44,
                                  right = 154,
                                  top = -10), #here the map boundaries given by ChatGPT earlier came in
                         zoom = 5,
                         maptype = "stamen_toner_lite",
                         color = "color")
```

```
## i © Stadia Maps © Stamen Design © OpenMapTiles © OpenStreetMap contributors.
```

```
ggmap(map_AUS)
```




```
map_AUS_family <- ggmap(map_AUS) +
  geom_point(data = wals_nPN,
             aes(x = Longitude,
                 y = Latitude,
                 color = Family),
             show.legend = T) +
  scale_color_colorblind() + #better color
  theme_map() + #removes axes labels and puts the legend in bottom left corner of map
  theme(legend.text = element_text(size = 10),
        legend.title = element_text(size = 12)) +
  labs(color = "Families")
map_AUS_family
```



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