

# Lab 9: APIs

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## Lab report

### Exercises

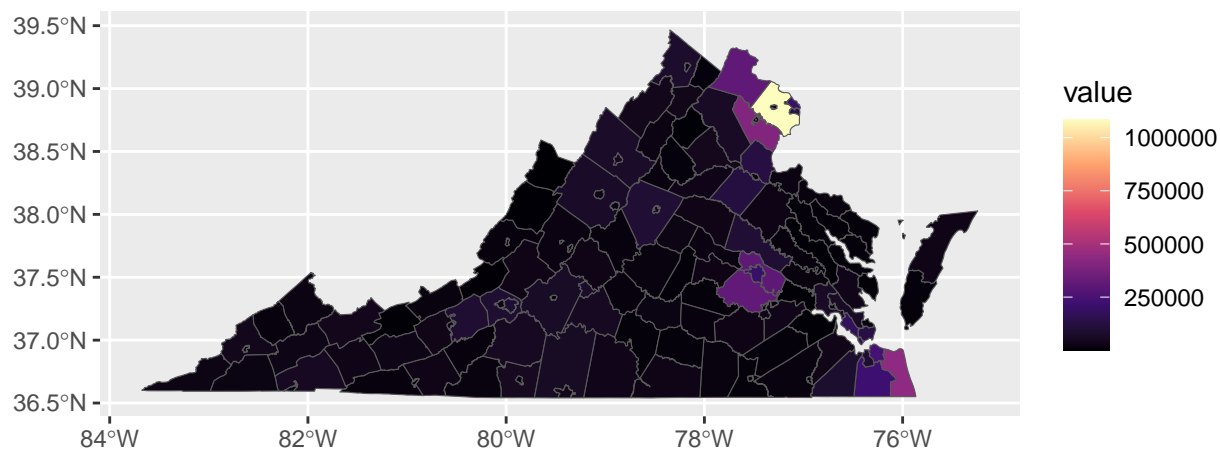
#### Exercise 1

## Getting data from the 2010 decennial Census

## Warning: \* You have not set a Census API key. Users without a key are limited to 500  
## queries per day and may experience performance limitations.  
## i For best results, get a Census API key at  
## [http://api.census.gov/data/key\\_signup.html](http://api.census.gov/data/key_signup.html) and then supply the key to the  
## 'census\_api\_key()' function to use it throughout your tidycensus session.  
## This warning is displayed once per session.

## Census API call: [https://api.census.gov/data/2010/dec/sf1?get=P001001%2CNAME&for=county%3A%](https://api.census.gov/data/2010/dec/sf1?get=P001001%2CNAME&for=county%3A%2Cstate)

## Using Census Summary File 1



## Exercise 2

## Exercise 3

## Getting data from the 2010 decennial Census

## Using Census Summary File 1

```
library(tidyr)

va_tracts_wide <- va_tracts_2010 %>%
  pivot_wider(
    names_from = variable,
    values_from = value
  )
```

## Exercise 4

```
library(dplyr)

va_tracts_final <- va_tracts_wide %>%
  mutate(
    pct_nonwhite = ((P001001 - P003002) / P001001) * 100,
    pct_owned = ((H004002 + H004003) / H001001) * 100
  )
```

**Exercise 5**

**Exercise 6**

**Exercise 7**