Accessing the Census in R Cheatsheet

tidycensus: Return tidy data frames from the US Census Bureau API. Works with ACS and Decennial Census data.

Install Census API key:

```
census_api_key("YOUR API KEY GOES HERE", install = TRUE)
```

Load variables example:

```
load_variables(year = 2017, dataset = "acs5", cache = TRUE)
```

Get Decennial Census data example:

```
get_decennial(geography = "state",
                            variables = "P001001")
```

Get ACS Census data example:

```
get_acs(geography = "tract"
          variables = c(family_poverty = "B17010_002"),
          state = "51",
          county = "540",
          geometry = T)
```

Calculate the margin of error for a derived sum example:

```
df %>% summarize (
  est_df = sum(estimate),
  moe_df = moe_sum(moe = moe, estimate = estimate))
```

Also note tidycensus::moe_product, moe_prop, moe_ratio

Evaluate whether the difference in two estimates is statistically significant:

```
significance(est1 = df$estimate[1],
             est2 = df$estimate[2],
             moe1 = df$moe[1],
             moe2 = df$moe[2])
```

tigris: Download U.S. Census TIGER shapefiles and load them as spatial objects in R

Look up FIPS codes for specific geographies example:

```
lookup_code("Virginia", "Charlottesville")
```

List counties example:

```
list_counties("Virginia")
```

Download counties shapefile example:

```
counties(state = "Virginia", cb = TRUE)
```

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censusapi: retrieve data from any Census API endpoint

Set API key:

```
Sys.setenv(CENSUS_KEY="YOUR API KEY GOES HERE")
readRenviron("~/.Renviron")
Sys.getenv("CENSUS_KEY")
```

View a lists of Census API endpoints:

```
listCensusApis()
```

Retrieve variable metadata example:

```
listCensusMetadata(name = "timeseries/healthins/sahie",
                                  type = "variables")
```

Retrieve geography metadata example:

```
listCensusMetadata(name = "timeseries/healthins/sahie",
                   type = "geography")
```

Retrieve Census data from a given API example:

```
getCensus(name = "timeseries/healthins/sahie",
                            vars = c("NAME", "IPRCAT"),
                            region = "county:*",
                            regionin = "state:51",
                            time = 2017)
```