

Geo 511:Task 2

My grandfather says summers are getting hotter

Group 2

Objectives

- ❑ How about summer temperatures in Miami, FL, compared with Buffalo, NY?
- ❑ How about winter temperatures in Buffalo, NY, compared with summer time?
- ❑ Answer: My grandfather says summers are getting hotter.

Data download + preparation

```
dataurl="https://data.giss.nasa.gov/tmp/gistemp/STATIONS/tmp_USW00014733_14_0_1/station.txt"
```

```
Buffalo_dataurl="https://data.giss.nasa.gov/tmp/gistemp/STATIONS/tmp_USW00014733_14_0_1/station.txt"
```

```
Florida_dataurl="https://data.giss.nasa.gov/tmp/gistemp/STATIONS/tmp_USW00012839_14_0_1/station.txt"
```

```
Allstation_temp <- bind_rows("Buffalo, NY" = Buffalo_temp,  
                             "Miami, Florida" = Florida_temp  
                             .id = "Station")
```

Data Virtualization

How about
summer
temperatures in
Miami, FL,
compared with
Buffalo, NY?

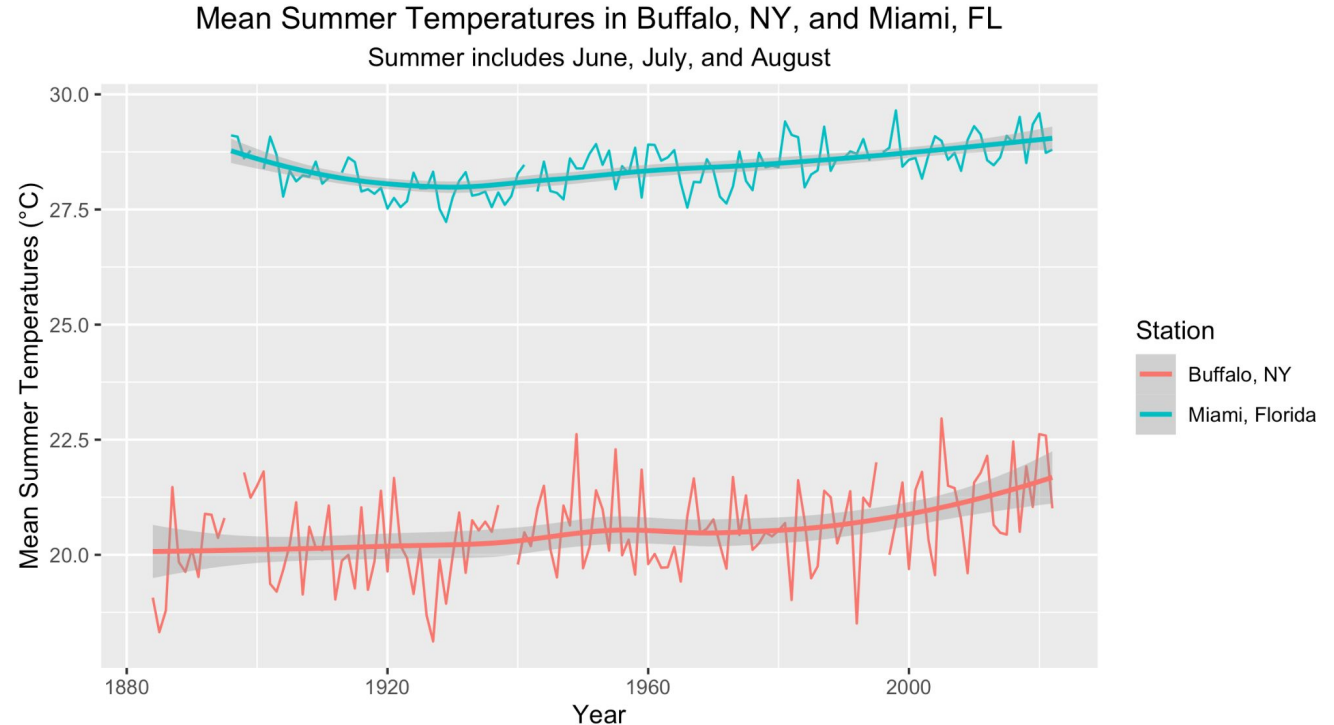


Figure.1. Data from the global Historical Climate Network. Lines are LOESS smooth.

Data Virtualization

How about winter temperatures in Buffalo, NY, compared with summer time?

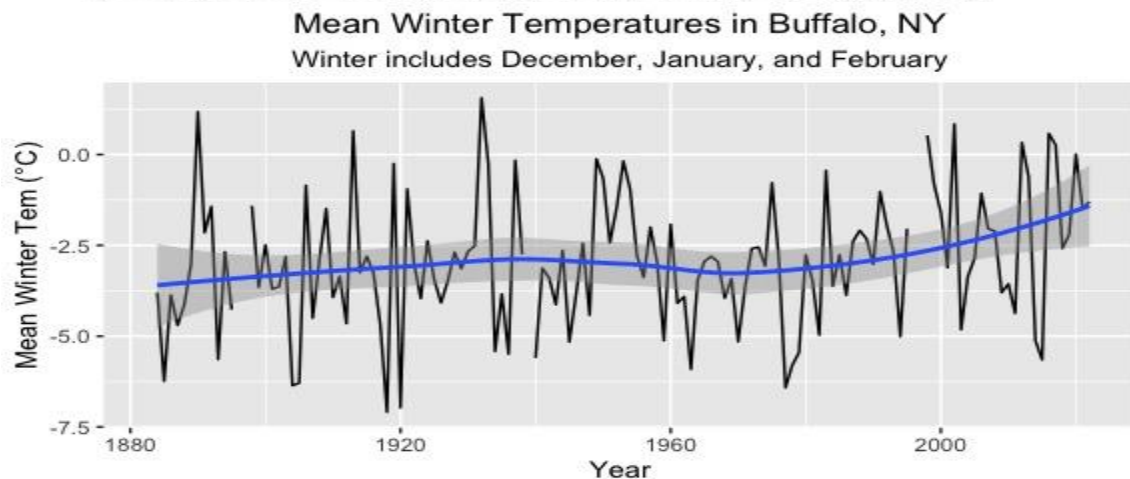
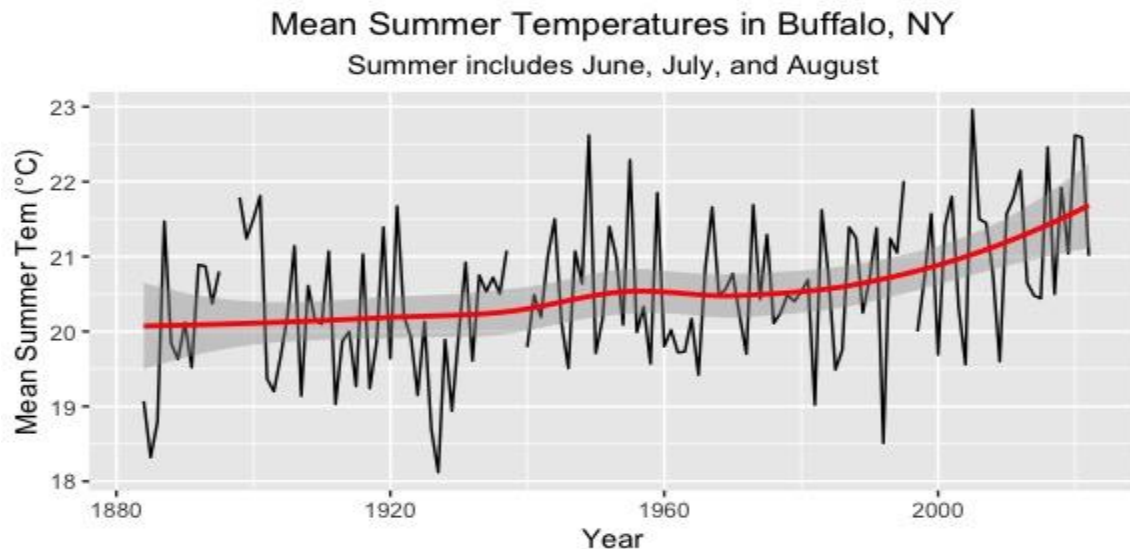


Figure.3. Data from the global Historical Climate Network. Blue line is a LOESS smooth.

Answer: My grandfather says summers are getting hotter.

The summers are getting hotter since 1880, and mean temperature has risen by about 1.6 °C.

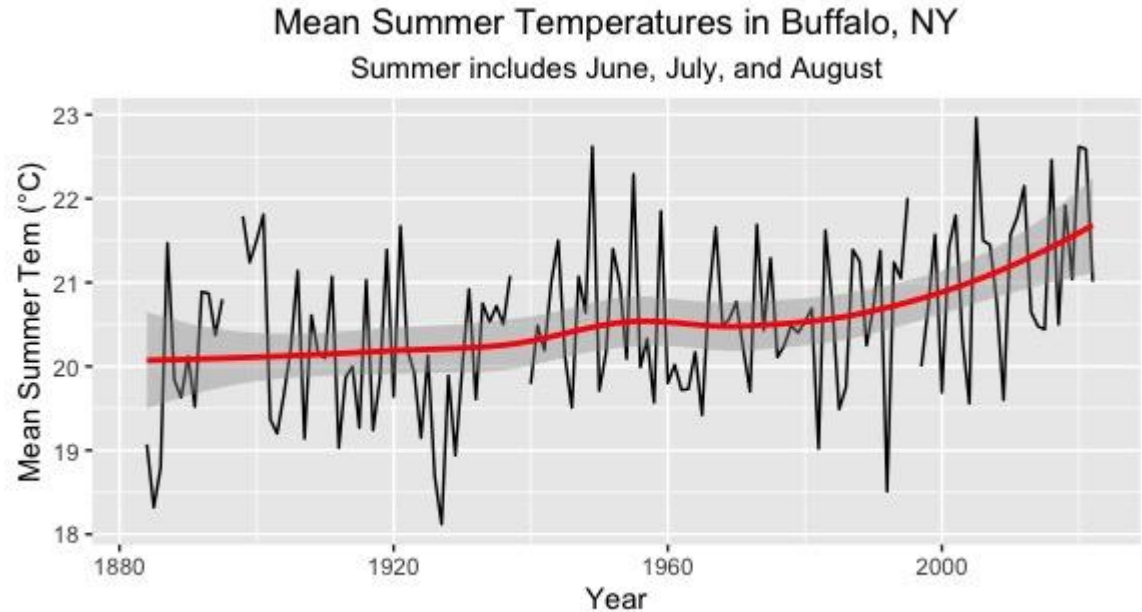


Figure.2. Data from the global Historical Climate Network. Red line is a LOESS smooth.