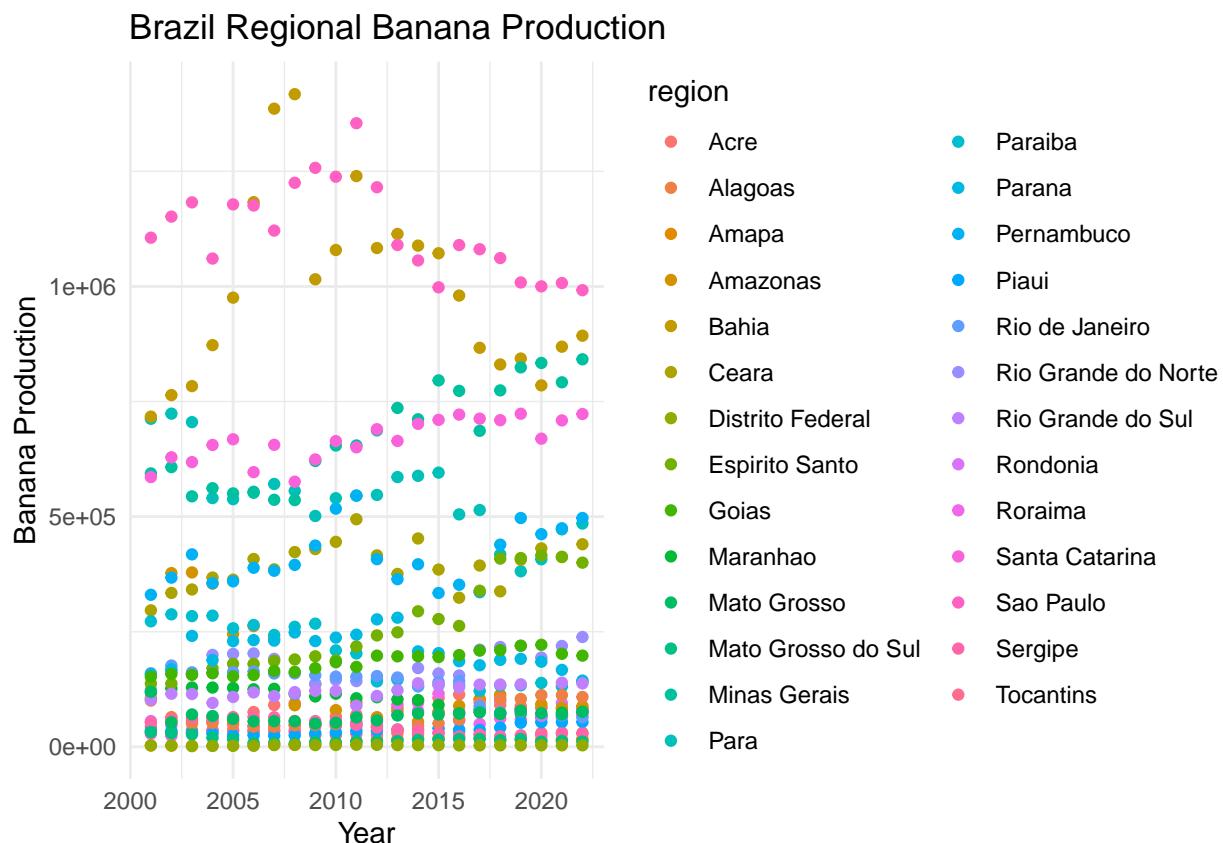


# Banana Graphs

2025-11-08

## Brazil Regional Banana Production - Initial View of Banana Dataset

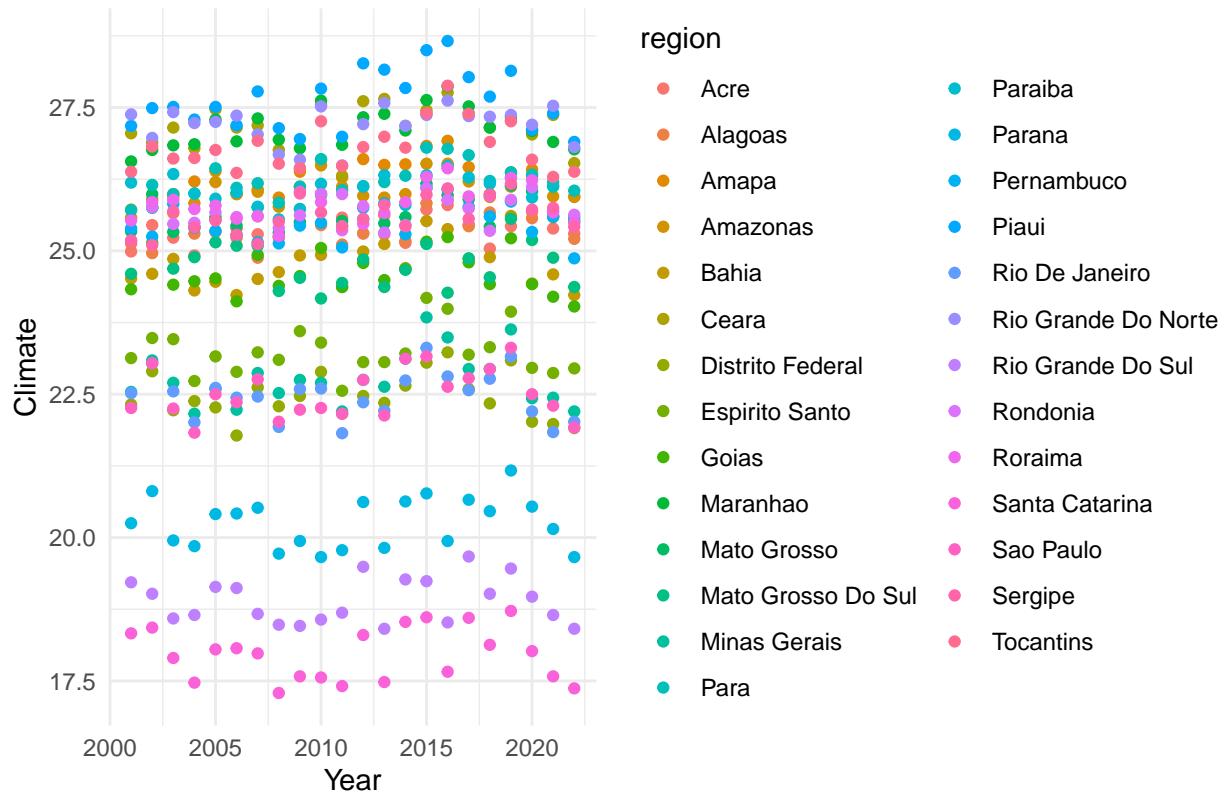
```
ggplot(brazilBAN, aes(x = year, y = prod, color = region)) +  
  geom_point() +  
  labs(title = "Brazil Regional Banana Production",  
       x = "Year",  
       y = "Banana Production") +  
  theme_minimal()
```



## Brazil Regional Climate - Initial View of Climate Dataset

```
ggplot(brazilCLI, aes(x = year, y = climate_Mean, color = region)) +  
  geom_point() +  
  labs(title = "Brazil Regional Climate",  
       x = "Year",  
       y = "Climate") +  
  theme_minimal()
```

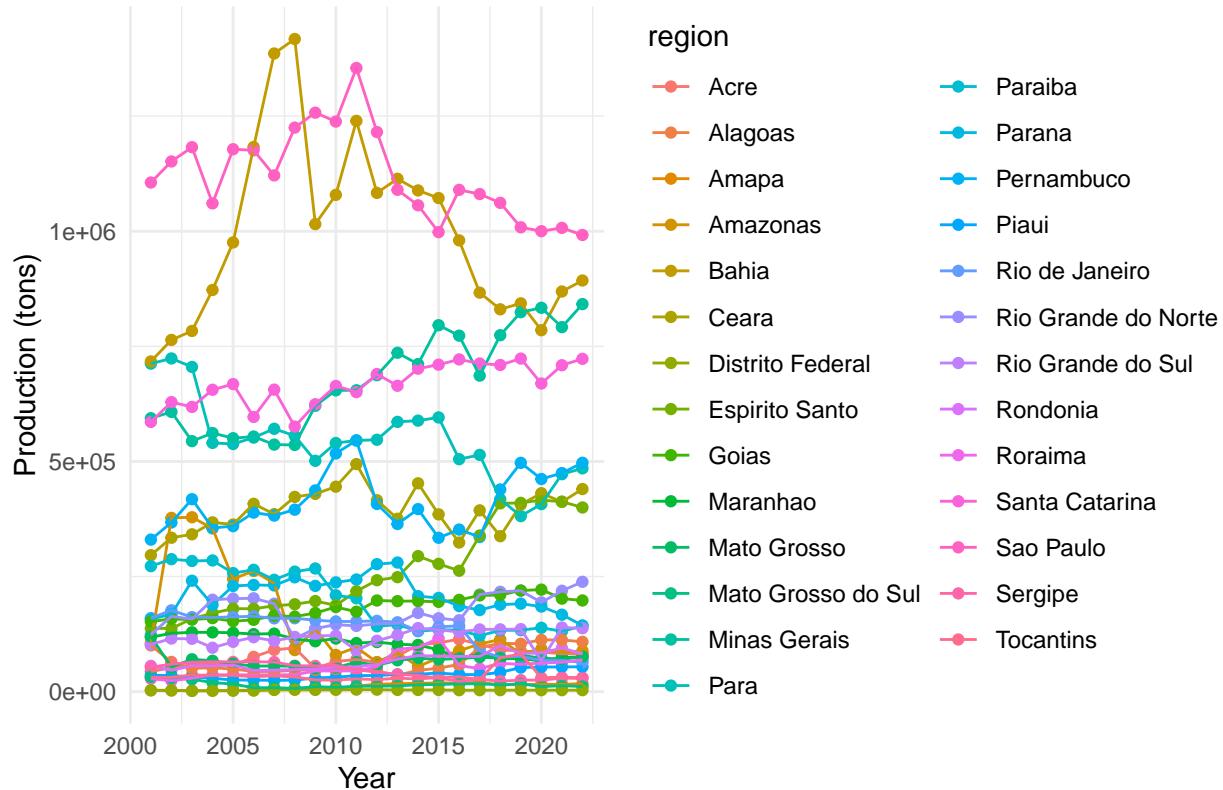
## Brazil Regional Climate



## Brazil Regional Banana Production (2001-2022)

```
ggplot(brazilALL, aes(year, prod, color = region)) +
  geom_point() +
  geom_line() +
  labs(
    title = "Brazil Regional Banana Production (2001-2022)",
    x = "Year",
    y = "Production (tons)"
  ) +
  theme_minimal()
```

## Brazil Regional Banana Production (2001–2022)



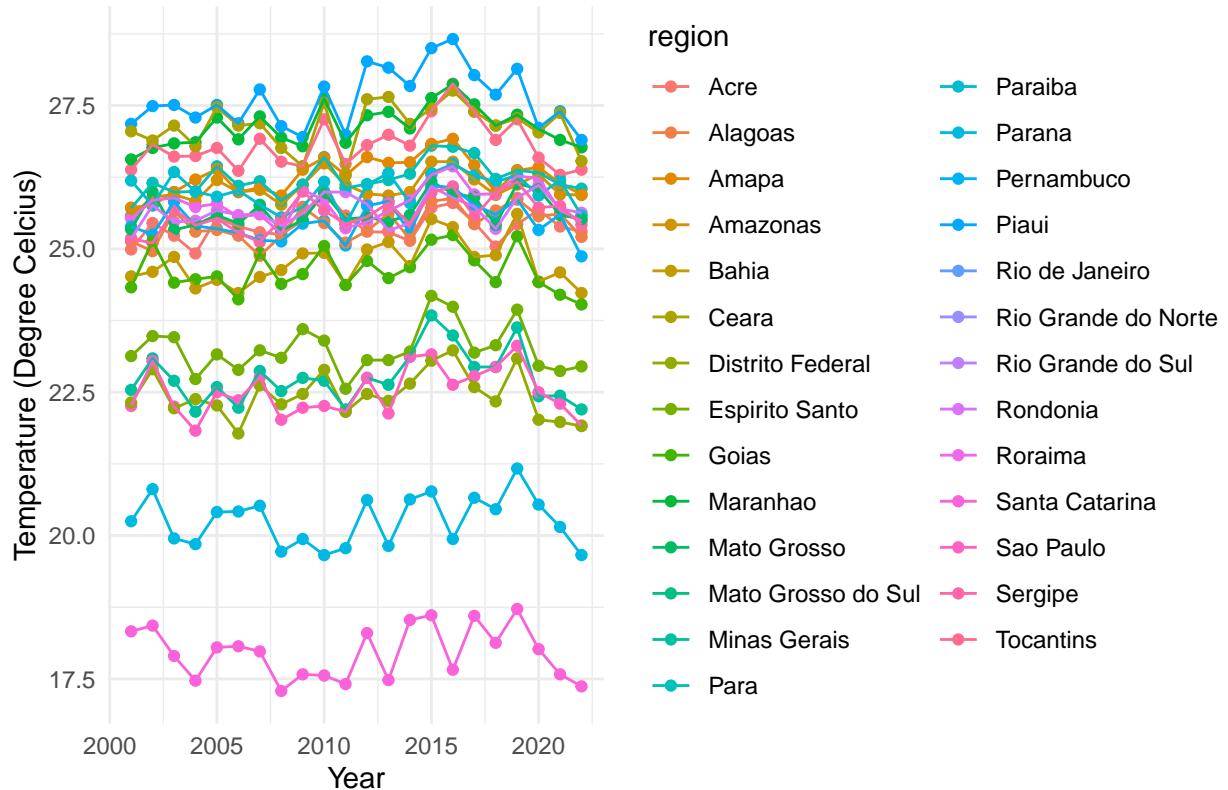
## Mean Annual Temperature by Region

```
ggplot(brazilALL, aes(year, climate_Mean, color = region)) +
  geom_point() +
  geom_line() +
  labs(
    title = "Mean Annual Temperature by Region",
    x = "Year",
    y = "Temperature (Degree Celcius)"
  ) +
  theme_minimal()

## Warning: Removed 88 rows containing missing values or values outside the scale range
## (`geom_point()`).

## Warning: Removed 88 rows containing missing values or values outside the scale range
## (`geom_line()`).
```

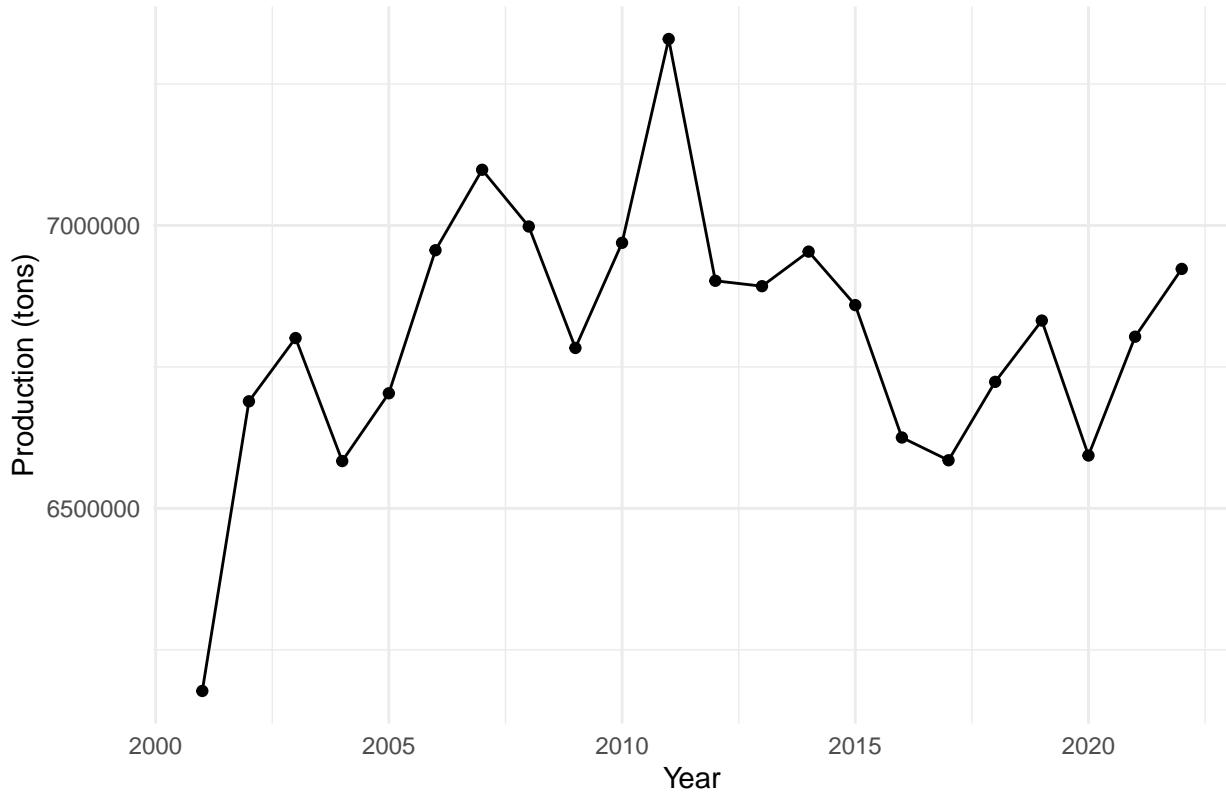
## Mean Annual Temperature by Region



## Aggregated Brazil Banana Production (2001-2022)

```
ggplot(braziltOTAL, aes(year, total_prod)) +
  geom_point() +
  geom_line() +
  labs(
    title = "Aggregated Brazil Banana Production (2001-2022)",
    x = "Year",
    y = "Production (tons)"
  ) +
  theme_minimal()
```

## Aggregated Brazil Banana Production (2001–2022)



## Aggregated Brazil Land Banana Farmed (2001-2022)

```
ggplot(braziltOTAL, aes(year, total_areaKM)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Brazil Land Banana Farmed (2001-2022)",  
    x = "Year",  
    y = "Land (km^2)"  
) +  
  theme_minimal()
```

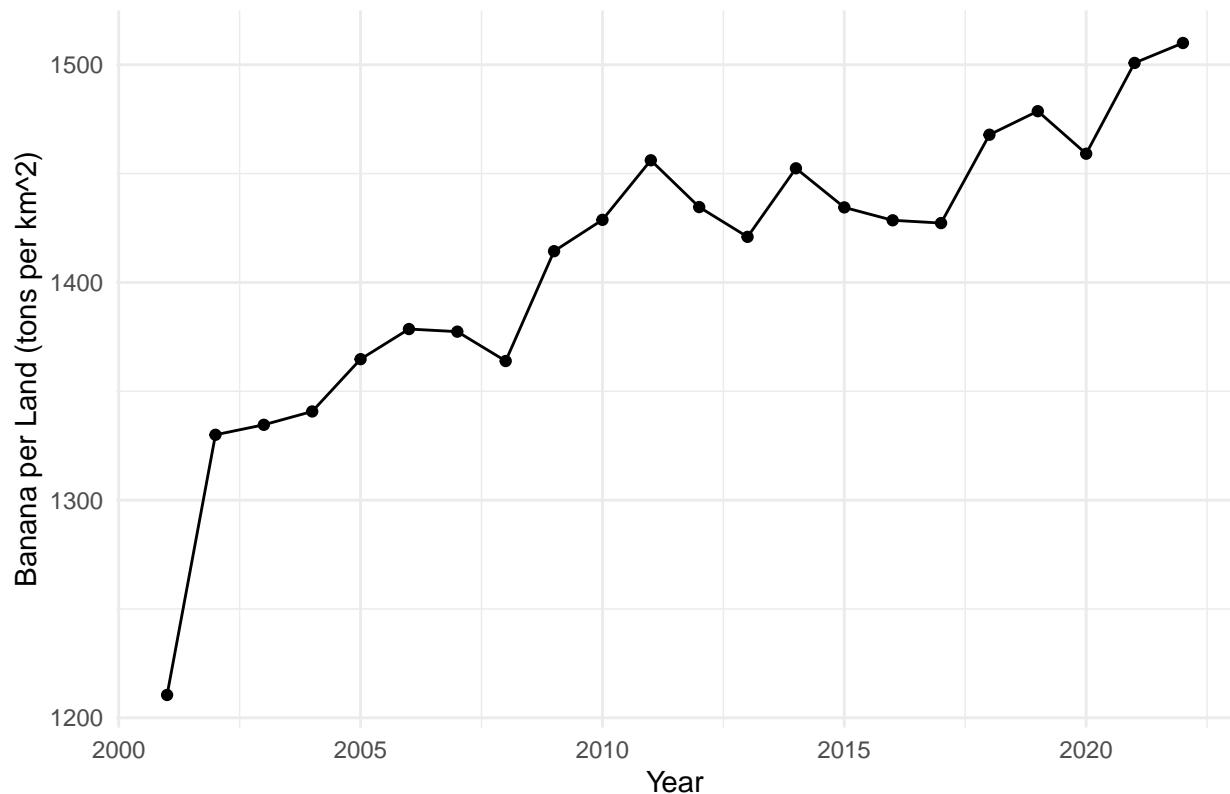
### Aggregated Brazil Land Banana Farmed (2001–2022)



### Aggregated Brazil Land Banana Farmed Per Banana Production (2001-2022)

```
ggplot(braziltOTAL, aes(year, total_prodperareaKM)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Brazil Land Banana Farmed Per Banana Production (2001-2022)",  
    x = "Year",  
    y = "Banana per Land (tons per km^2)"  
) +  
  theme_minimal()
```

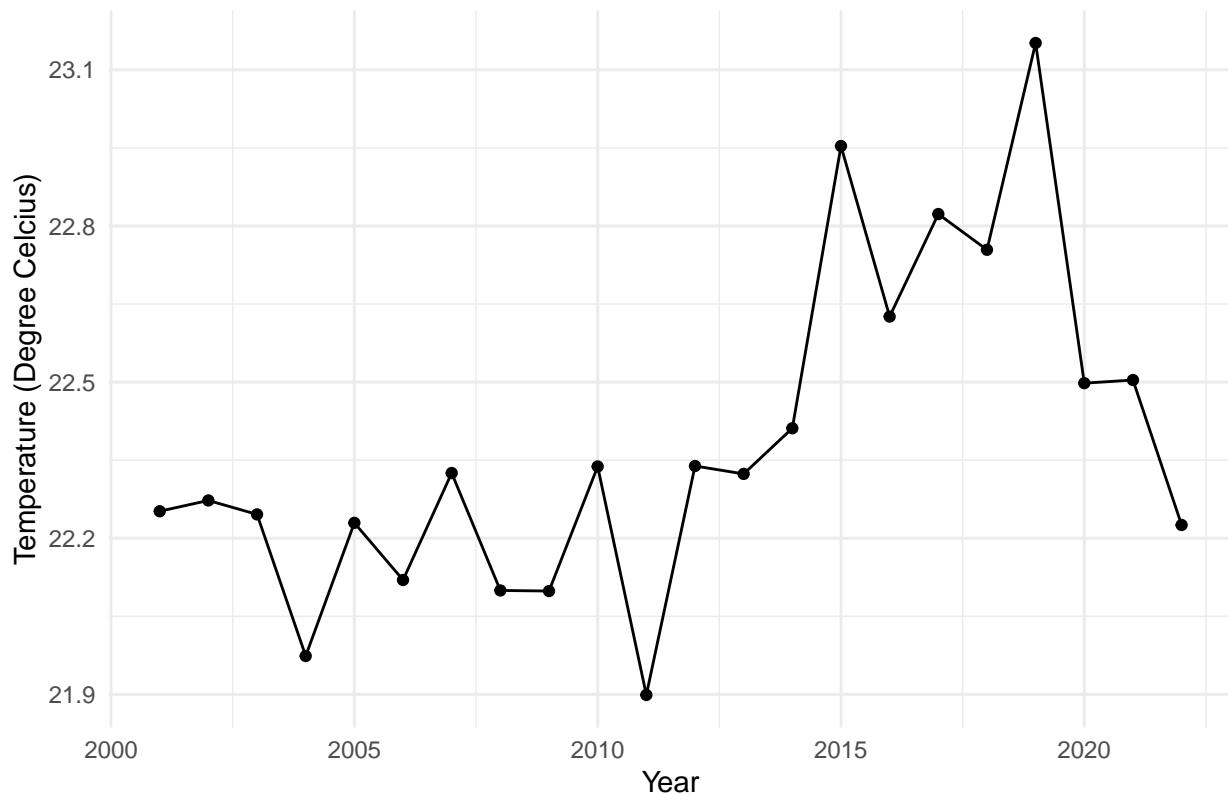
## Aggregated Brazil Land Banana Farmed Per Banana Production (2001–2022)



## Aggregated Mean Annual Temperature

```
ggplot(braziltOTAL, aes(year, total_mean)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Mean Annual Temperature",  
    x = "Year",  
    y = "Temperature (Degree Celcius)"  
) +  
  theme_minimal()
```

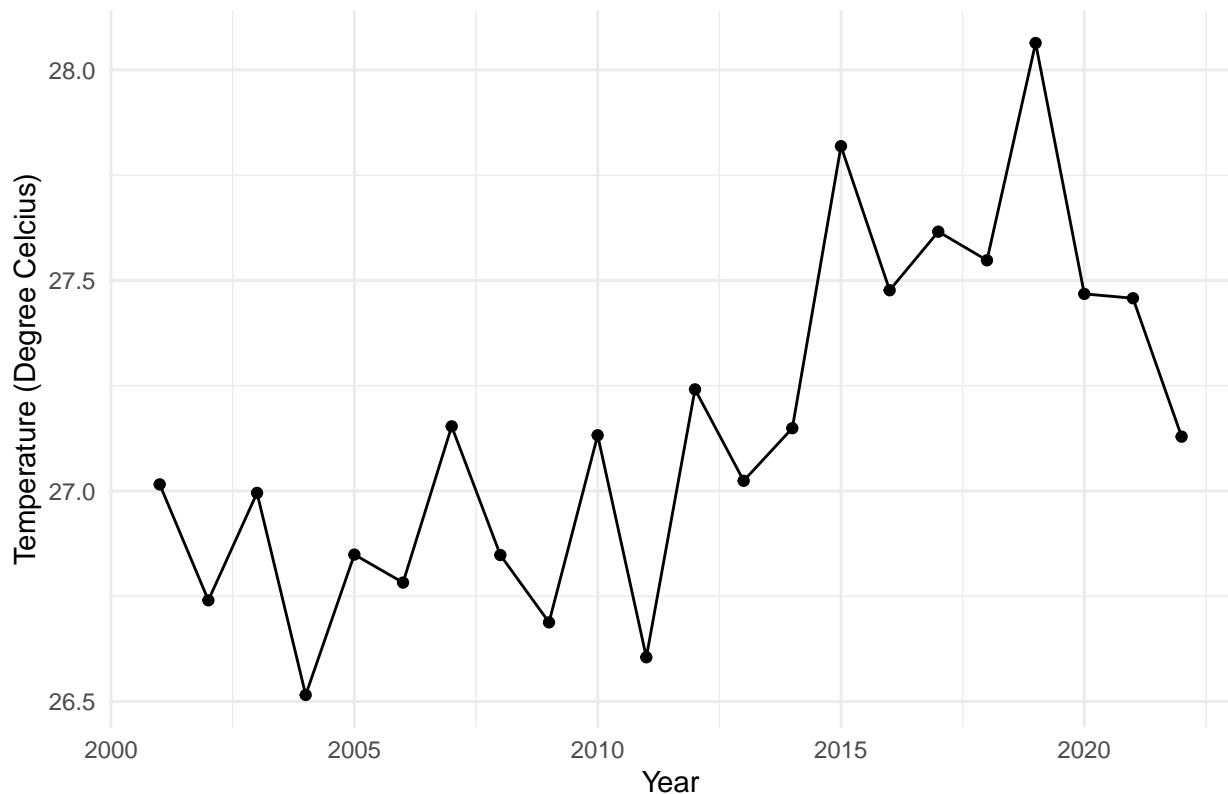
## Aggregated Mean Annual Temperature



## Aggregated Max Annual Temperature

```
ggplot(braziltOTAL, aes(year, total_max)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Max Annual Temperature",  
    x = "Year",  
    y = "Temperature (Degree Celcius)"  
) +  
  theme_minimal()
```

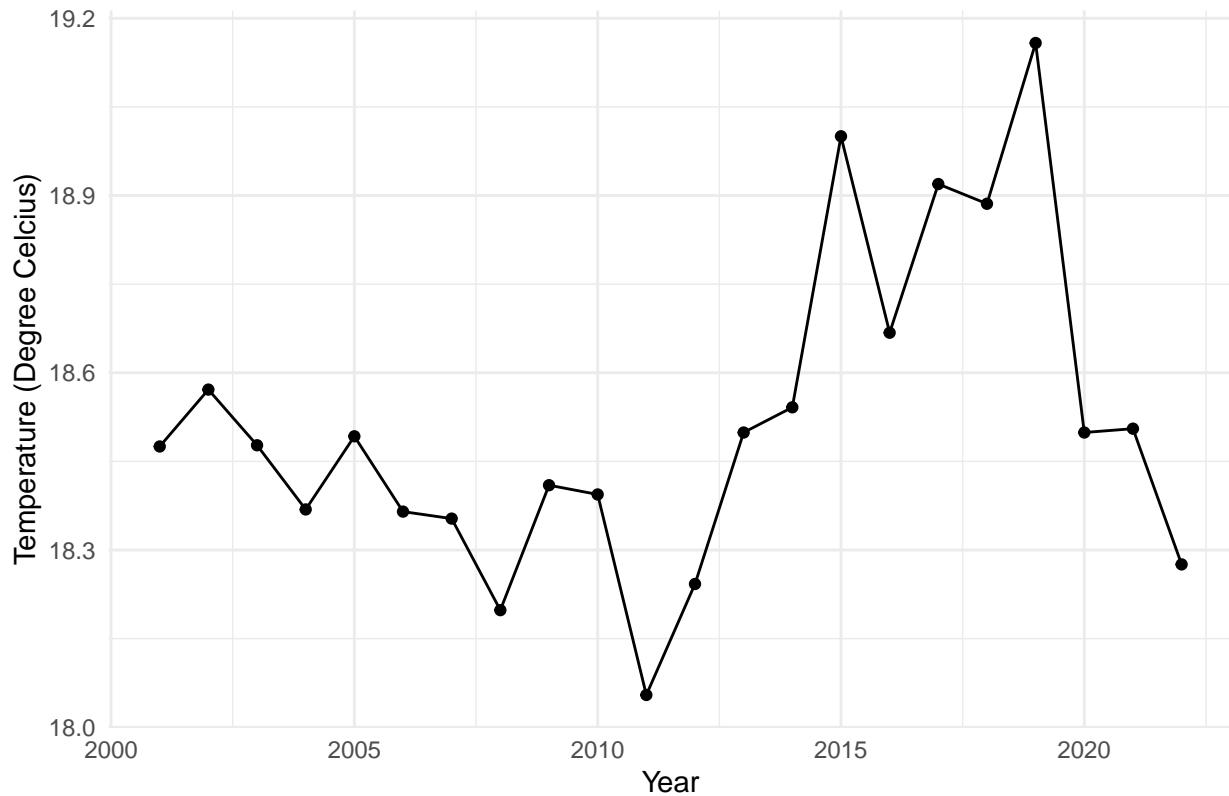
## Aggregated Max Annual Temperature



## Aggregated Min Annual Temperature

```
ggplot(braziltOTAL, aes(year, total_min)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Min Annual Temperature",  
    x = "Year",  
    y = "Temperature (Degree Celcius)"  
) +  
  theme_minimal()
```

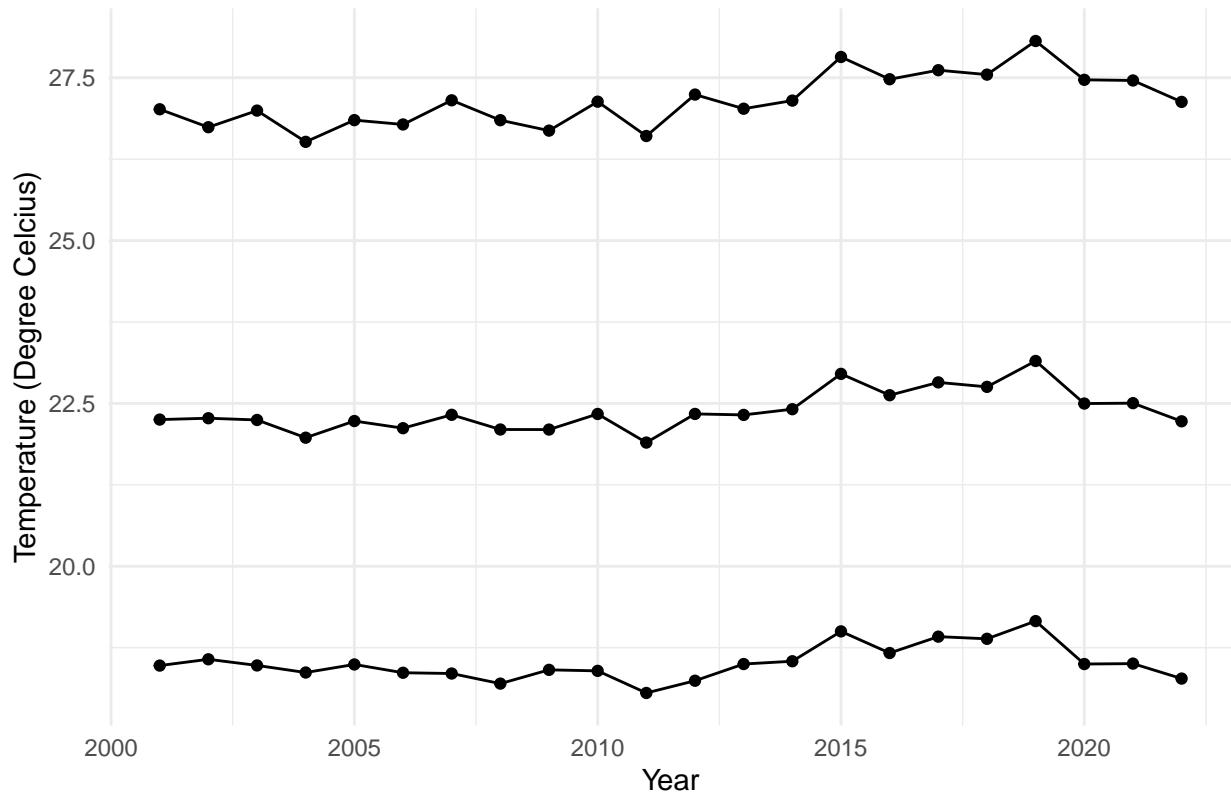
### Aggregated Min Annual Temperature



### Aggregated Brazil Temperature Trends (2001-2022)

```
ggplot(braziltOTAL) +
  geom_point(aes(year, total_mean)) +
  geom_line(aes(year, total_mean)) +
  geom_point(aes(year, total_min)) +
  geom_line(aes(year, total_min)) +
  geom_point(aes(year, total_max)) +
  geom_line(aes(year, total_max)) +
  labs(
    title = "Aggregated Brazil Temperature Trends (2001-2022)",
    x = "Year",
    y = "Temperature (Degree Celcius)"
  ) +
  theme_minimal()
```

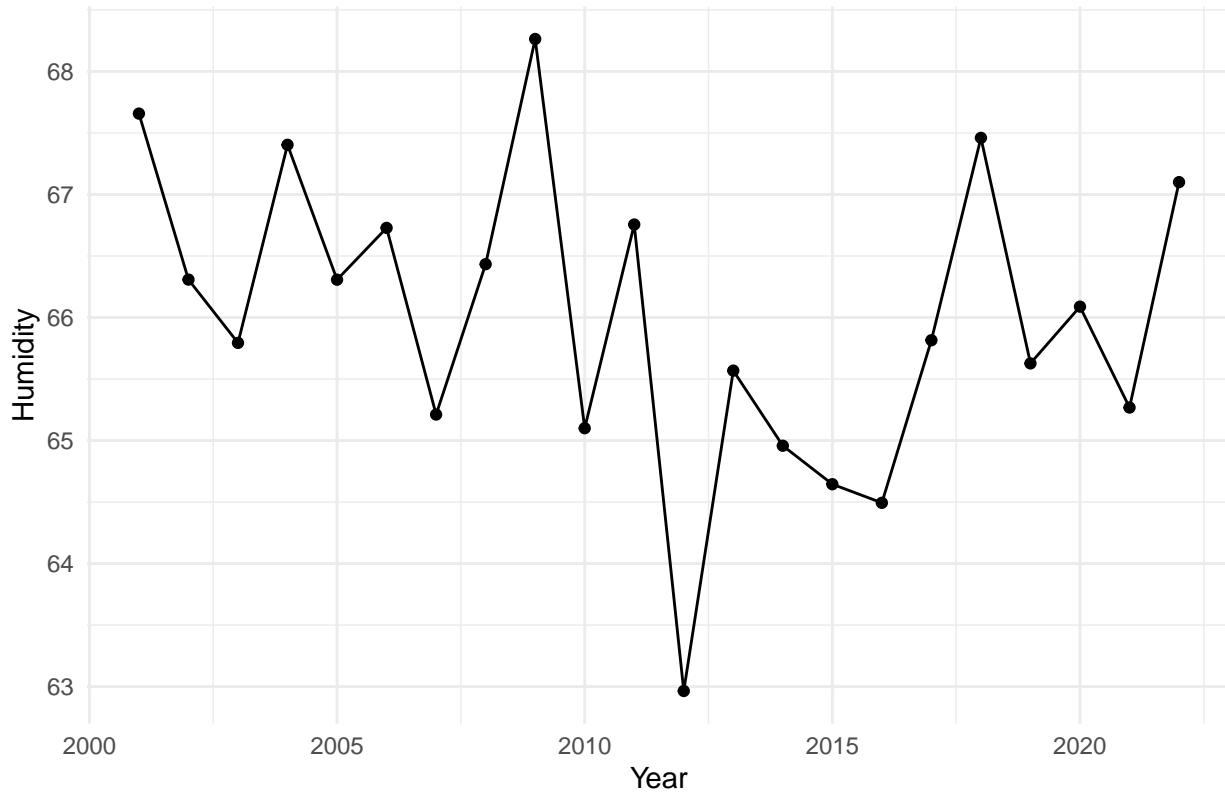
## Aggregated Brazil Temperature Trends (2001–2022)



## Aggregated Humidity

```
ggplot(braziltOTAL, aes(year, total_humidity)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Humidity",  
    x = "Year",  
    y = "Humidity"  
) +  
  theme_minimal()
```

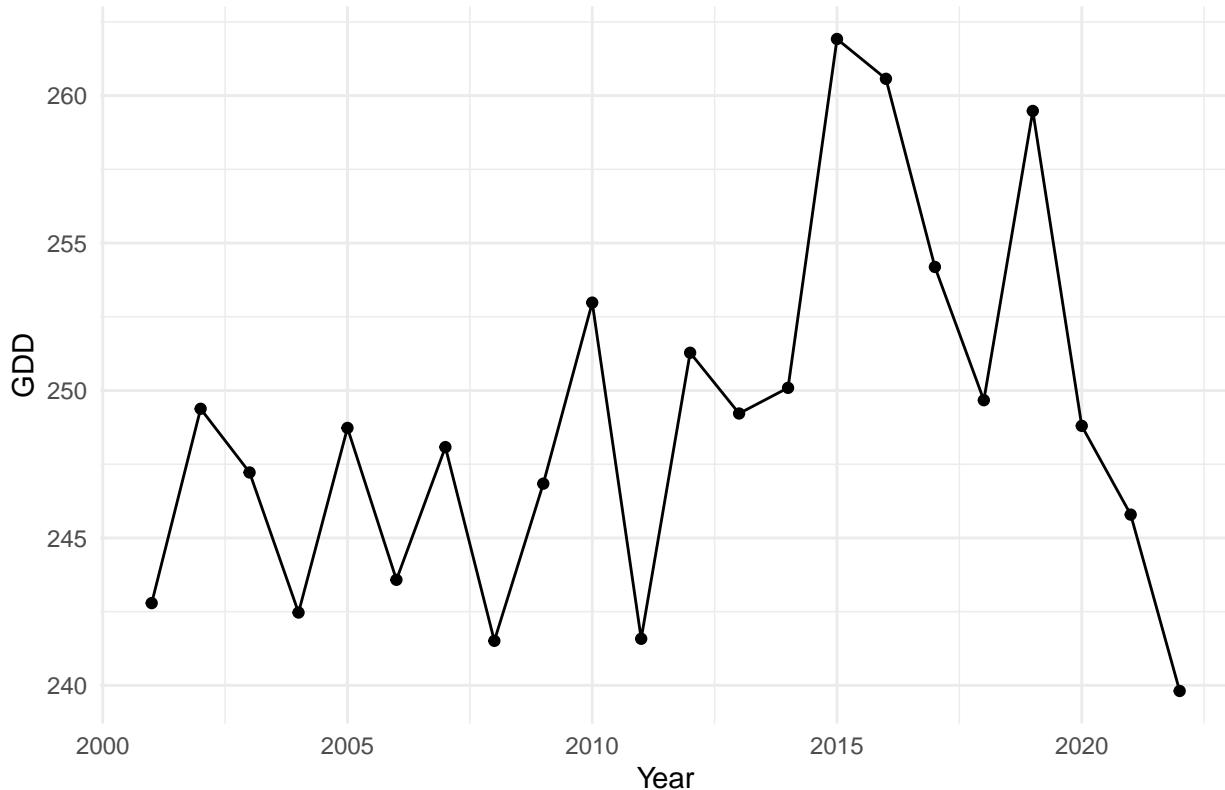
## Aggregated Humidity



## Aggregated GDD

```
ggplot(braziltOTAL, aes(year, total_GDD)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated GDD",  
    x = "Year",  
    y = "GDD"  
) +  
  theme_minimal()
```

## Aggregated GDD



## Aggregated Annual Temperature Range

```
ggplot(braziltOTAL, aes(year, total_range)) +  
  geom_point() +  
  geom_line() +  
  labs(  
    title = "Aggregated Annual Temperature Range",  
    x = "Year",  
    y = "Temperature Range (Degree Celcius)"  
) +  
  theme_minimal()
```

### Aggregated Annual Temperature Range

