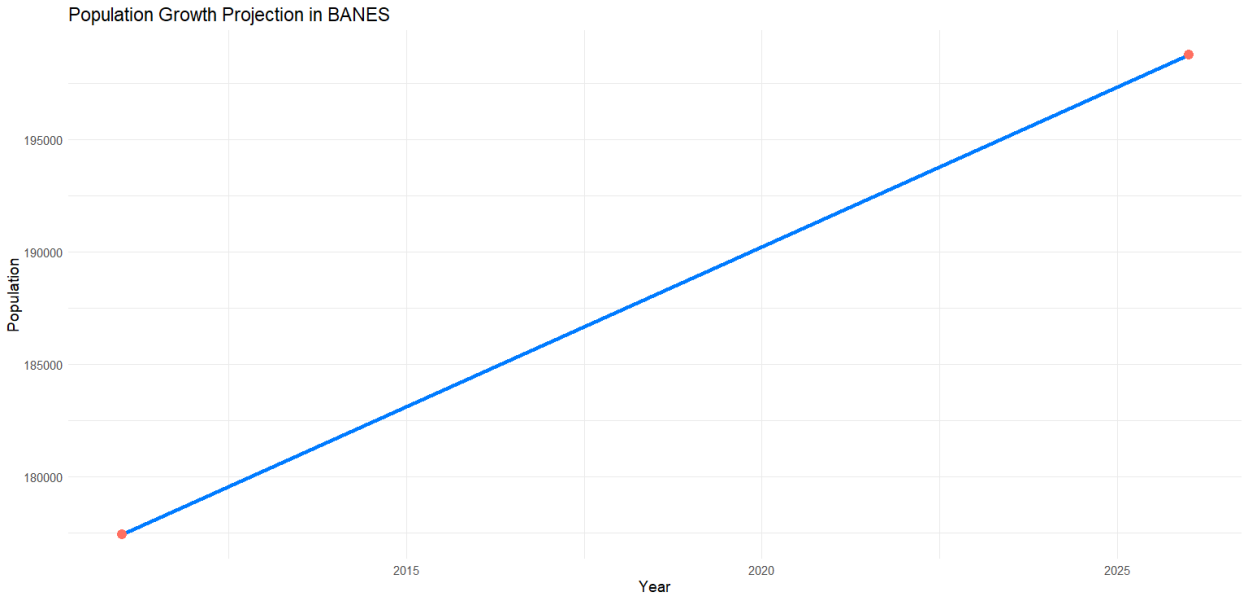
Charts

Charts in R studio:

Population Growth Projection

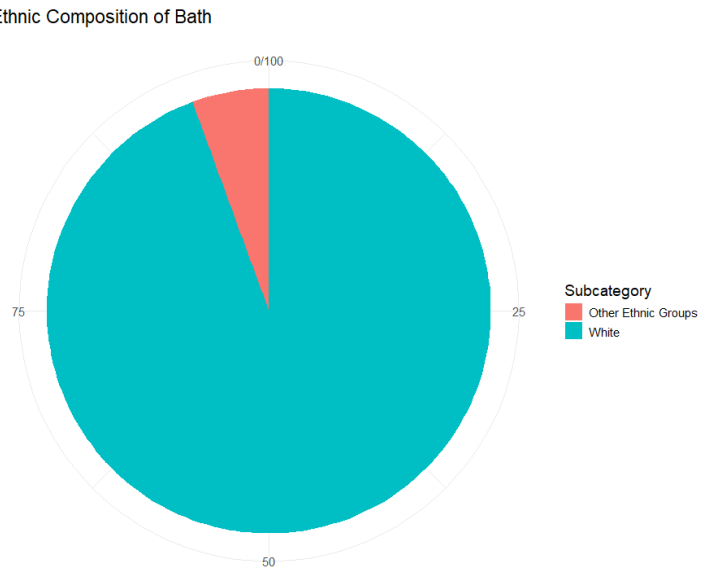
```
# Filter data for population projection

> pop_projection <- banes_data[banes_data$Category == "Population Projection", ]

> pop_projection$Year <- as.numeric(pop_projection$Year)

> pop_projection$Value <- as.numeric(pop_projection$Value)

>

> # Plot

> ggplot(pop_projection, aes(x = Year, y = Value)) +

+   geom_line(color = "#007BFF", size = 1.5) +

+   geom_point(size = 4, color = "#FF6F61") +

+   labs(title = "Population Growth Projection in BANES", x = "Year", y = "Population") +

+   theme_minimal() +

+   theme(text = element_text(size = 14))
```



Ethnic Composition

```
# Filter data for ethnic composition

> ethnicity <- banes_data[banes_data$Category == "Ethnic Composition", ]
```

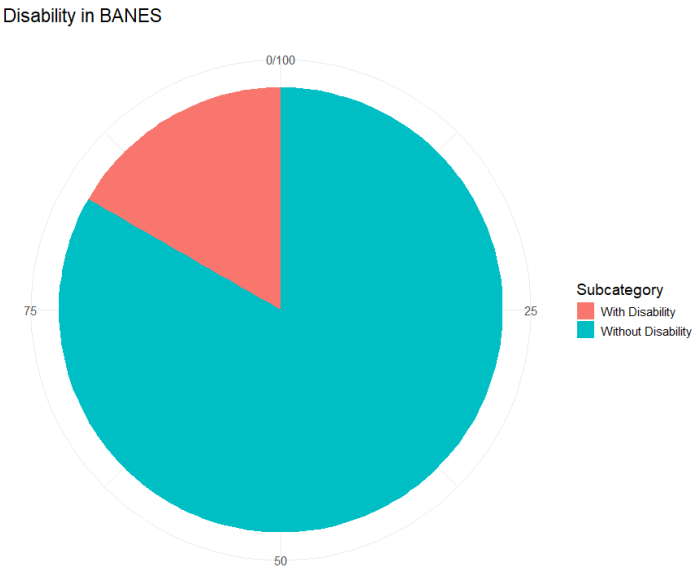
```
> ethnicity$Value <- as.numeric(gsub("%", "", ethnicity$Value))
>
> # Plot
> ggplot(ethnicity, aes(x = "", y = Value, fill = Subcategory)) +
+   geom_bar(stat = "identity", width = 1) +
+   coord_polar("y") +
+   labs(title = "Ethnic Composition of Bath") +
+   theme_minimal() +
+   theme(text = element_text(size = 14), axis.title = element_blank())
```



Disability Statistic

```
# Filter data for disability statistic
> disability <- banes_data[banes_data$Category == "Disability Statistic", ]
> disability$Value <- as.numeric(gsub("%", "", disability$Value))
>
> # Plot
> ggplot(disability, aes(x = "", y = Value, fill = Subcategory)) +
+   geom_bar(stat = "identity", width = 1) +
+   coord_polar("y") +
+   labs(title = "Disability in BANES") +
+   theme_minimal() +
```

+ theme(text = element_text(size = 14), axis.title = element_blank())



Gender Distribution

Filter data for gender distribution

> gender_data <- banes_data[banes_data$Category == "Gender Distribution",]

> gender_data$Value <- as.numeric(gender_data$Value)

>

> # Plot

> ggplot(gender_data, aes(x = Subcategory, y = Value, fill = Subcategory)) +

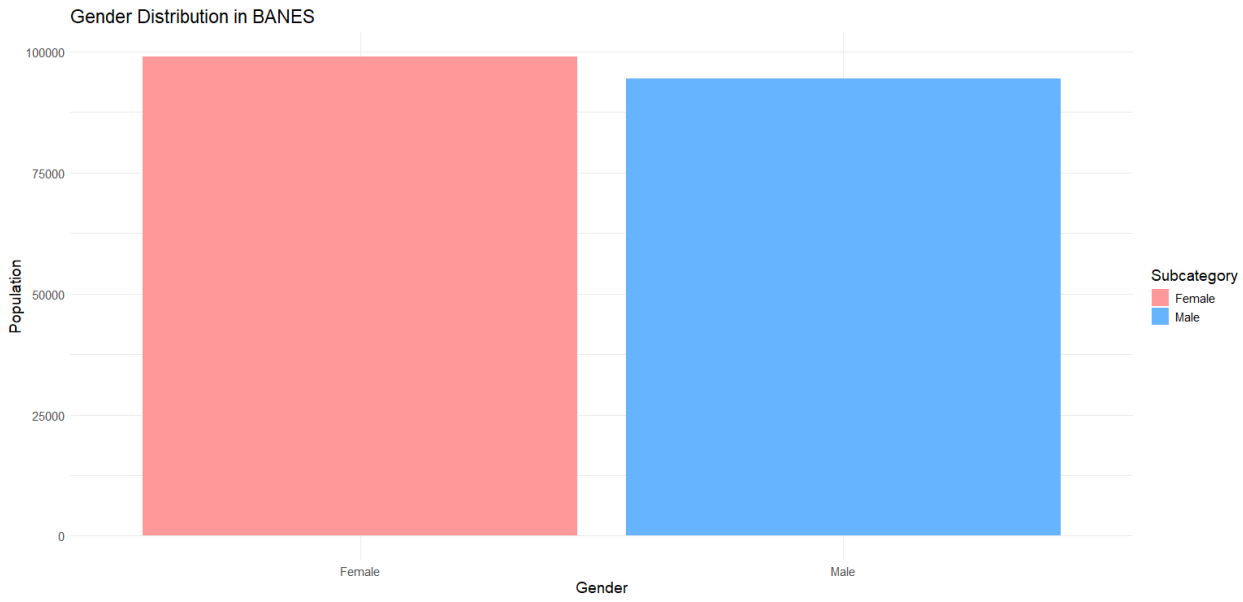
+ geom_bar(stat = "identity") +

+ labs(title = "Gender Distribution in BANES", x = "Gender", y = "Population") +

+ scale_fill_manual(values = c("#FF9999", "#66B3FF")) +

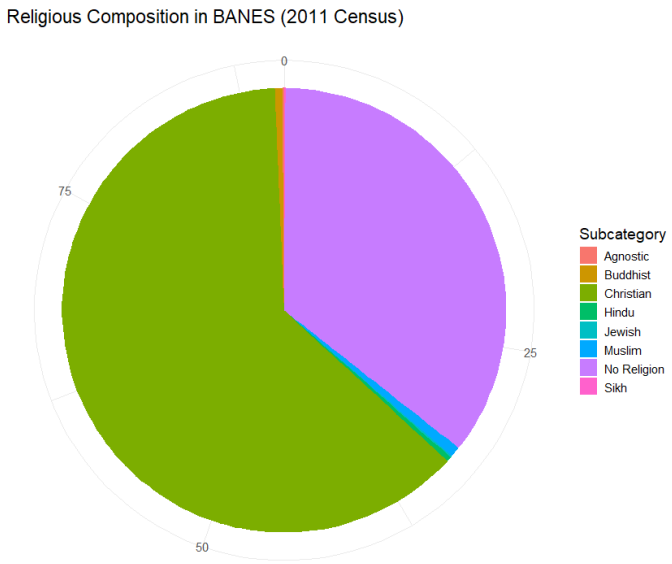
+ theme_minimal() +

+ theme(text = element_text(size = 14))



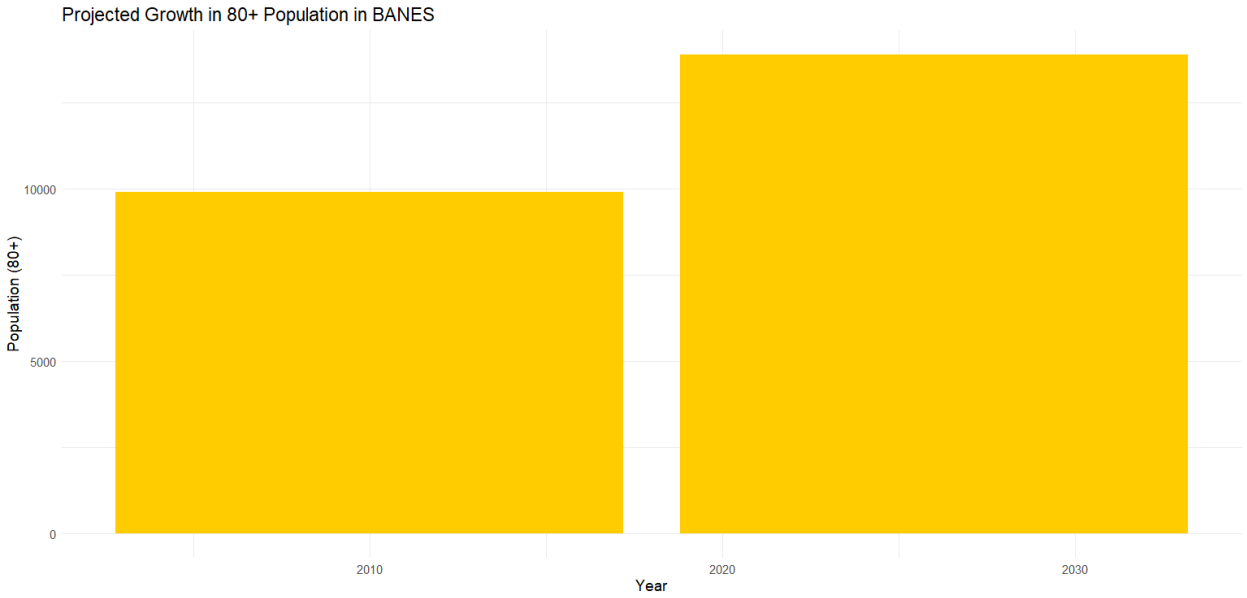
Religious Composition

```
# Filter data for religious composition

> religion <- banes_data[banes_data$Category == "Religious Composition", ]

> religion$Value <- as.numeric(gsub("%", "", religion$Value))

>

> # Plot

> ggplot(religion, aes(x = "", y = Value, fill = Subcategory)) +

+   geom_bar(stat = "identity", width = 1) +

+   coord_polar("y") +

+   labs(title = "Religious Composition in BANES (2011 Census)") +

+   theme_minimal() +

+   theme(text = element_text(size = 14), axis.title = element_blank())
```



Population Aged 80+

```
# Filter data for population aged 80+
> age_80_plus <- banes_data[banes_data$Category == "Population Aged 80+", ]
> age_80_plus$Year <- as.numeric(age_80_plus$Year)
> age_80_plus$Value <- as.numeric(age_80_plus$Value)
>
> # Plot
> ggplot(age_80_plus, aes(x = Year, y = Value)) +
+   geom_bar(stat = "identity", fill = "#FFCC00") +
+   labs(title = "Projected Growth in 80+ Population in BANES", x = "Year", y = "Population (80+)") +
+   theme_minimal() +
+   theme(text = element_text(size = 14))
```


Projected Growth in 80+ Population in BANES
Population (80+)
10000
5000
0
2010
2020
2030
Year