

stat041__yyan1__dcastro2

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For project 1, we decide to explore employment rates and salaries for college graduates based on majors. We used data provided by fivethirtyeight package as well as survey from the Federal Reserve.

```
library(fivethirtyeight)
library(ggplot2)
library(readr)
library(dplyr)
```

```
##
## Attaching package: 'dplyr'

## The following objects are masked from 'package:stats':
##
##   filter, lag

## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
library(forcats)
library(ggthemes)
theme_set(theme_fivethirtyeight())
theme_update(plot.title = element_text(hjust = 0.5))
```

```
college <- data.frame(college_recent_grads)
```

```
college_fed <- read_csv("~/stat041/labs/stat041_p1_grp14/labor-market-for-recent-college-grads.csv")
```

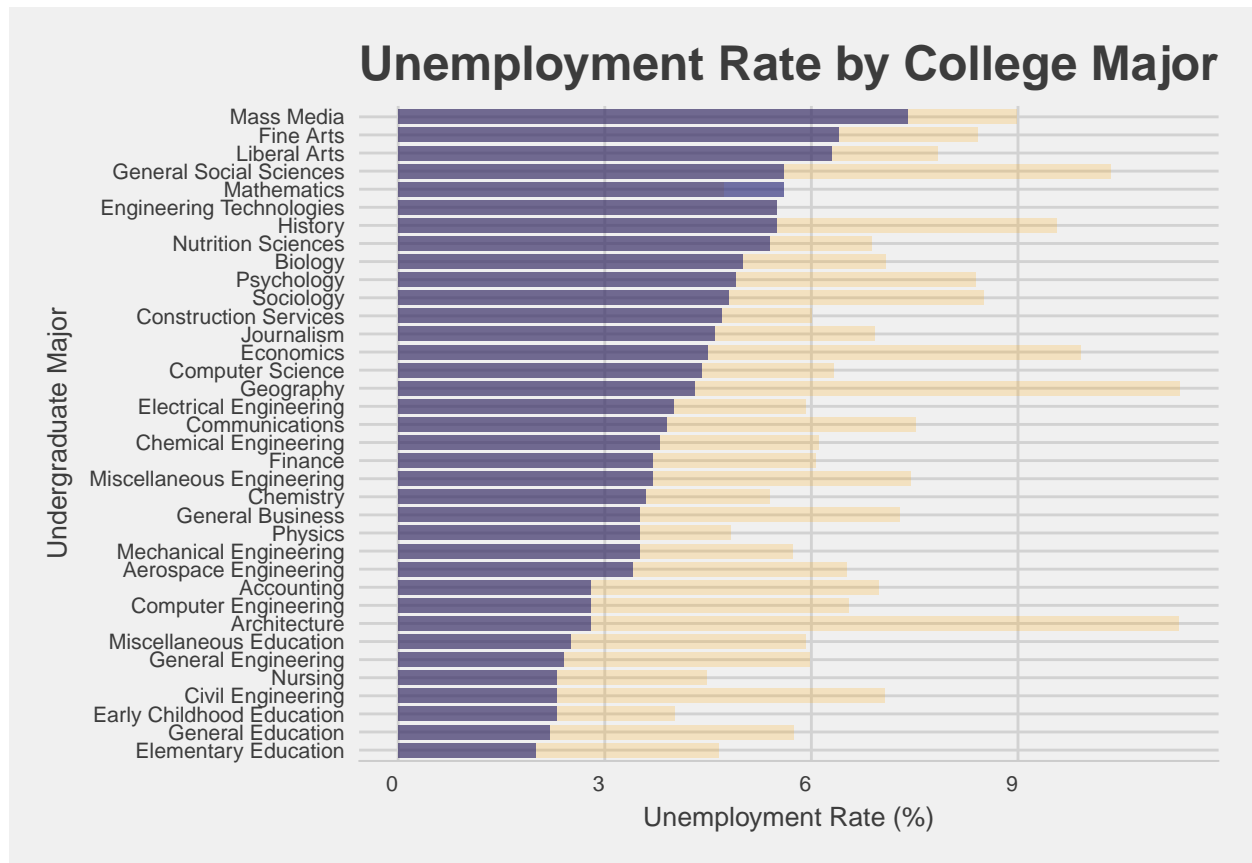
```
## Parsed with column specification:
## cols(
##   Major = col_character(),
##   `Unemployment Rate` = col_double(),
##   `Underemployment Rate` = col_double(),
##   `Median Wage Early Career` = col_number(),
##   `Median Wage Mid-Career` = col_number(),
##   `Share with Graduate Degree` = col_double()
## )
```

```
college_fed <- college_fed[1:74,]
overall_fed <- college_fed[74,]
college_fed <- college_fed[-74,]
college.join <- inner_join(college_fed,college,by = c("Major" = "major"))
```

```
#Instruction source: https://rstudio-pubs-static.s3.amazonaws.com/7433\_4537ea5073dc4162950abb715f513469
college.join$Major<- factor(college.join$Major,levels = college.join$Major[order(college.join$`Unemployment Rate`)])
```

```
par(mar=c(6,6,6,3)+.1)
ggplot(college.join) +
  geom_col(mapping = aes(Major,`unemployment_rate`*100), alpha = 0.2, fill = "orange", color = FALSE, width = 1) +
  geom_col(mapping = aes(Major,`Unemployment Rate`), alpha = 0.6, fill = "midnightblue", color = FALSE, width = 1)
```

```
coord_flip() +
labs(y = "Unemployment Rate (%)", x = "Undergraduate Major", title = "Unemployment Rate by College Major",
theme(axis.text.x = element_text(angle = 0, vjust = 1, hjust = 1),
axis.line.x = element_line(colour = "grey80"),
axis.title = element_text(size = 10),
axis.text = element_text(size = 8),
title = element_text(size = 12)
)
```



```
ggplot(college.join) +
geom_col(mapping = aes(Major, (`Median Wage Mid-Career` - `Median Wage Early Career`)/`Median Wage Early Career`),
geom_col(mapping = aes(Major, `Unemployment Rate`), alpha = 0.6, fill = "midnightblue", color = FALSE,
coord_flip() +
labs(y = "Unemployment Rate (%)", x = "Undergraduate Major", title = "Unemployment vs. Wage Growth")
theme(axis.text.x = element_text(angle = 0, vjust = 1, hjust = 1),
axis.line.x = element_line(colour = "grey80"),
axis.title = element_text(size = 10),
axis.text = element_text(size = 8),
title = element_text(size = 9)
)
```

