Visualizations

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```
library(ggplot2)
```

```
## Warning: package 'ggplot2' was built under R version 4.1.1
```

```
library(grid)
library(gridBase)
```

```
## Warning: package 'gridBase' was built under R version 4.1.1
```

```
library(dplyr)
```

```
## Warning: package 'dplyr' was built under R version 4.1.1
```

```
##
## 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(shiny)
```

```
## Warning: package 'shiny' was built under R version 4.1.2
```

```
dat = read.csv("C:/Users/sebas/OneDrive/Documents/Datathon2022/Project/track.csv")
```

```
low = dat$accepted[dat$tract_to_msa_income_percentage<50]

fifty.up = dat$accepted[dat$tract_to_msa_income_percentage>50 &
                          dat$tract_to_msa_income_percentage<100]

hundred.up = dat$accepted[dat$tract_to_msa_income_percentage>100 &
                            dat$tract_to_msa_income_percentage<150]
```

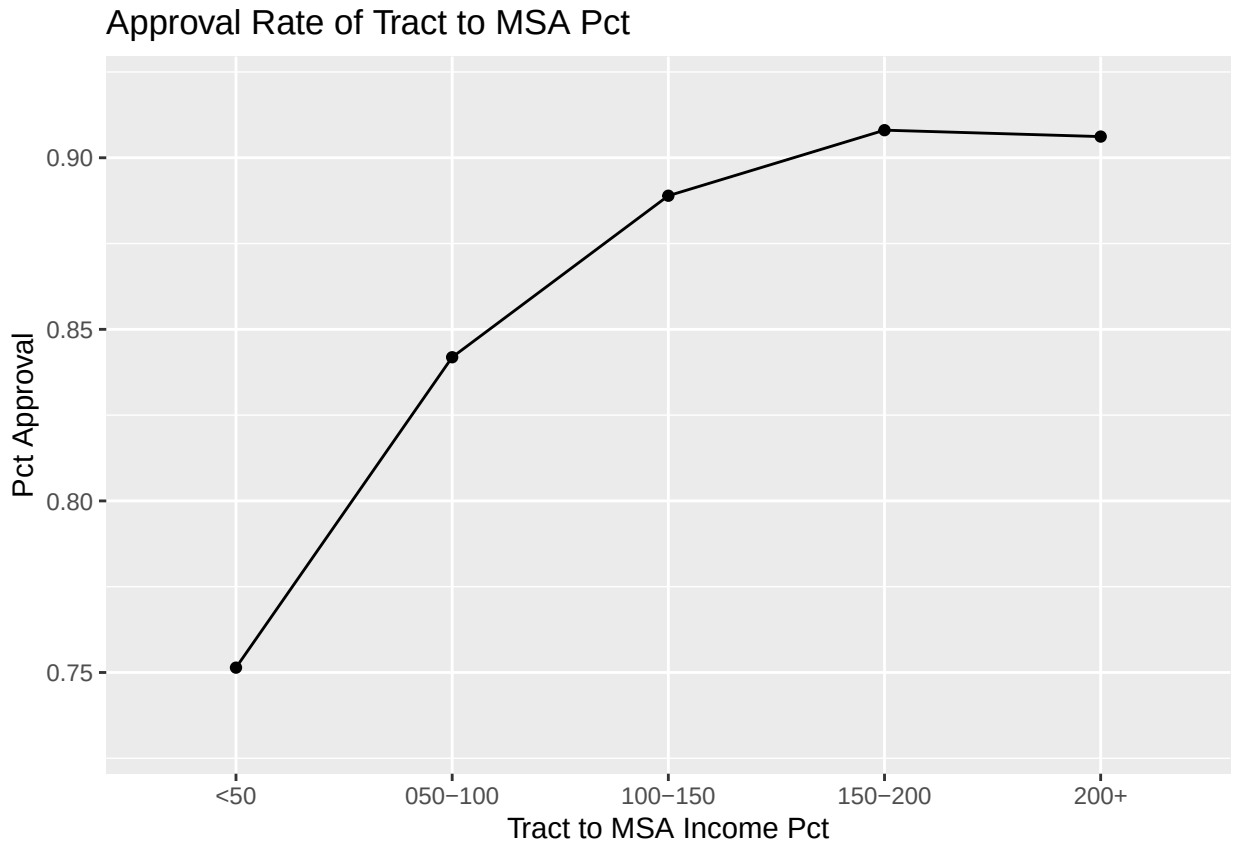
```r
hfifty.up = dat$accepted[dat$tract_to_msa_income_percentage>150 &
                           dat$tract_to_msa_income_percentage<200]

high = dat$accepted[dat$tract_to_msa_income_percentage>200]

low.pct = sum(low)/length(low)
fift.up.pct = sum(fifty.up)/length(fifty.up)
hundred.up.pct = sum(hundred.up)/length(hundred.up)
hfifty.up.pct = sum(hfifty.up)/length(hfifty.up)
high.pct = sum(high)/length(high)


bruh = data.frame(y = c(low.pct, fift.up.pct, hundred.up.pct,
                        hfifty.up.pct, high.pct),
                  x = c("<50","050-100","100-150","150-200","200+"))

ggplot(data = bruh,
       aes(x=x, y=y, group = 1)) +
  geom_line()+ geom_point()+
  ylab("Pct Approval") + xlab("Tract to MSA Income Pct") +
  ggtitle("Approval Rate of Tract to MSA Pct") + ylim(min = .73, max = .92)
```



#Loan Type from Tract Minority Population Percentage

```
theme_set(theme_classic())


conventional = dat$tract_minority_pop_percent[dat$loan_type == "Conventional"]
conv.pct = sum(conventional)/length(conventional)

FHA = dat$tract_minority_pop_percent[dat$loan_type == "FHA"]
FHA.pct = sum(FHA)/length(FHA)

VA = dat$tract_minority_pop_percent[dat$loan_type == "VA"]
VA.pct = sum(VA)/length(VA)

RHS.FSA = dat$tract_minority_pop_percent[dat$loan_type == "RHS/FSA"]
RHS.FSA.pct = sum(RHS.FSA)/length(RHS.FSA)

head(dat$tract_minority_pop_percent)
```

```
## [1] 84.39 24.86 89.71 75.32 94.26 51.56
```

```
bruh2 = data.frame(x = c("Conventional","FHA","VA","RHS/FSA"),
                   y = c(conv.pct, FHA.pct, VA.pct, RHS.FSA.pct))

ggplot(data = bruh2, aes(x = x, y = y))+
  geom_bar(stat = "identity") + ylab("Pct of Minorities in Tract")+ xlab("Loan Type")+
  ggtitle("Pct of Minority Population in Tract by Loan Type")
```