Capstone

Number of lines of code = 144

FINISHED

My statistical method is linear regression. I did not run into any bottlenecks performing this method. Each code runs in less than 1 second.

2014 Regression on Household Average Income

FINISHED

```
%r
data2014_HH_avgincome <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2014_data_Hou
    =TRUE,sep = ",")
t(names(data2014_HH_avgincome))
lm_Household_2014 <- lm(avg_combined_scores ~ Household, data=data2014_HH_avgincome)
summary(lm_Household_2014)
lm_Family_2014 <- lm(avg_combined_scores ~ Family, data=data2014_HH_avgincome)
summary(lm_Family_2014)
lm_Married_Couple_2014 <- lm(avg_combined_scores ~ Married_Couple, data=data2014_HH_a
summary(lm_Married_Couple_2014)
lm_Non_Family_2014 <- lm(avg_combined_scores ~ Non_Family, data=data2014_HH_avgincome
summary(lm_Non_Family_2014)
lm_ALL_HH_2014 <- lm(avg_combined_scores ~ Household+Family+Married_Couple+Non_Family
summary(lm_ALL_HH_2014)
```

2010 Regression on Household Average Income

FINISHED

```
%r
data2010_HH_avgincome <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2010_data_Hou
    =TRUE,sep = ",")
t(names(data2010_HH_avgincome))
lm_Household_2010 <- lm(avg_combined_scores ~ Household, data=data2010_HH_avgincome)
summary(lm_Household_2010)
lm_Family_2010 <- lm(avg_combined_scores ~ Family, data=data2010_HH_avgincome)
summary(lm_Family_2010)
lm_Married_Couple_2010 <- lm(avg_combined_scores ~ Married_Couple, data=data2010_HH_a
summary(lm_Married_Couple_2010)
lm_Non_Family_2010 <- lm(avg_combined_scores ~ Non_Family, data=data2010_HH_avgincome
summary(lm_Non_Family_2010)
lm_ALL_HH_2010 <- lm(avg_combined_scores ~ Household+Family+Married_Couple+Non_Family
summary(lm_ALL_HH_2010)
```

2007 Regression on Household Average Income

FINISHED

```
%r
data2007_HH_avgincome <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2007_data_Hou
    =TRUE,sep = ",")
t(names(data2007_HH_avgincome))
```

```
lm_Household_2007 <- lm(avg_combined_scores ~ Household, data=data2007_HH_avgincome)
summary(lm_Household_2007)
lm_Family_2007 <- lm(avg_combined_scores ~ Family, data=data2007_HH_avgincome)
summary(lm_Family_2007)
lm_Married_Couple_2007 <- lm(avg_combined_scores ~ Married_Couple, data=data2007_HH_a
summary(lm_Married_Couple_2007)
lm_Non_Family_2007 <- lm(avg_combined_scores ~ Non_Family, data=data2007_HH_avgincome
summary(lm_Non_Family_2007)
lm_ALL_HH_2007 <- lm(avg_combined_scores ~ Household+Family+Married_Couple+Non_Family
summary(lm_ALL_HH_2007)
```

2014 Regression on Household Type

FINISHED

```
%r
data2014_HH_type <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2014_data_Household
    ",")
t(names(data2014_HH_type))
lm_HH_Type_Married_Couple_2014 <- lm(avg_combined_scores ~ Married_Couple, data=data2
summary(lm_HH_Type_Married_Couple_2014)
lm_HH_Type_Male_householder_2014 <- lm(avg_combined_scores ~ Male_householder, data=d
summary(lm_HH_Type_Male_householder_2014)
lm_HH_Type_Female_householder_2014 <- lm(avg_combined_scores ~ Female_householder, da
summary(lm_HH_Type_Female_householder_2014)
lm_HH_Type_Nonfamily_2014 <- lm(avg_combined_scores ~ Nonfamily, data=data2014_HH_typ
summary(lm_HH_Type_Nonfamily_2014)
lm_HH_Type_ALL_2014 <- lm(avg_combined_scores ~ Married_Couple+Male_householder+Femal
    =data2014_HH_type)
summary(lm_HH_Type_ALL_2014)
```

2010 Regression on Household Type

FINISHED

```
%r
data2010_HH_type <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2010_data_Household
    ",")
t(names(data2010_HH_type))
lm_HH_Type_Married_Couple_2010 <- lm(avg_combined_scores ~ Married_Couple, data=data2
summary(lm_HH_Type_Married_Couple_2010)
lm_HH_Type_Male_householder_2010 <- lm(avg_combined_scores ~ Male_householder, data=d
summary(lm_HH_Type_Male_householder_2010)
lm_HH_Type_Female_householder_2010 <- lm(avg_combined_scores ~ Female_householder, da
summary(lm_HH_Type_Female_householder_2010)
lm_HH_Type_Nonfamily_2010 <- lm(avg_combined_scores ~ Nonfamily, data=data2010_HH_typ
summary(lm_HH_Type_Nonfamily_2010)
lm_HH_Type_ALL_2010 <- lm(avg_combined_scores ~ Married_Couple+Male_householder+Femal
    =data2010_HH_type)
summary(lm_HH_Type_ALL_2010)
```

2007 Regression on Household Type

FINISHED

```
%r
data2007_HH_type <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2007_data_Household
    ",")
```

```
t(names(data2007_HH_type))
lm_HH_Type_Married_Couple_2007 <- lm(avg_combined_scores ~ Married_Couple, data=data2
summary(lm_HH_Type_Married_Couple_2007)
lm_HH_Type_Male_householder_2007 <- lm(avg_combined_scores ~ Male_householder, data=d
summary(lm_HH_Type_Male_householder_2007)
lm_HH_Type_Female_householder_2007 <- lm(avg_combined_scores ~ Female_householder, da
summary(lm_HH_Type_Female_householder_2007)
lm_HH_Type_Nonfamily_2007 <- lm(avg_combined_scores ~ Nonfamily, data=data2007_HH_typ
summary(lm_HH_Type_Nonfamily_2007)
lm_HH_Type_ALL_2007 <- lm(avg_combined_scores ~ Married_Couple+Male_householder+Femal
    =data2007_HH_type)
```

2014 Regression on Race

FINISHED

```
%r
data2014_Race <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2014_data_Race.csv',
t(names(data2014_Race))
lm_Race_African_American_2014 <- lm(avg_combined_scores ~ African_American, data=data
summary(lm_Race_African_American_2014)
lm_Race_Asian_2014 <- lm(avg_combined_scores ~ Asian, data=data2014_Race)
summary(lm_Race_Asian_2014)
lm_Race_Caucasian_2014 <- lm(avg_combined_scores ~ Caucasian, data=data2014_Race)
summary(lm_Race_Caucasian_2014)
lm_Race_Hispanic_Latino_2014 <- lm(avg_combined_scores ~ Hispanic_Latino, data=data20
summary(lm_Race_Hispanic_Latino_2014)
lm_Race_ALL_2014 <- lm(avg_combined_scores ~ African_American+Asian+Caucasian+Hispani
summary(lm_Race_ALL_2014)
```

2010 Regression on Race

FINISHED

```
%r
data2010_Race <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2010_data_Race.csv',
t(names(data2010_Race))
lm_Race_African_American_2010 <- lm(avg_combined_scores ~ African_American, data=data
summary(lm_Race_African_American_2010)
lm_Race_Asian_2010 <- lm(avg_combined_scores ~ Asian, data=data2010_Race)
summary(lm_Race_Asian_2010)
lm_Race_Caucasian_2010 <- lm(avg_combined_scores ~ Caucasian, data=data2010_Race)
summary(lm_Race_Caucasian_2010)
lm_Race_Hispanic_Latino_2010 <- lm(avg_combined_scores ~ Hispanic_Latino, data=data20
summary(lm_Race_Hispanic_Latino_2010)
lm_Race_ALL_2010 <- lm(avg_combined_scores ~ African_American+Asian+Caucasian+Hispani
summary(lm_Race_ALL_2010)
```

2007 Regression on Race

FINISHED

```
%r
data2007_Race <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2007_data_Race.csv',
t(names(data2007_Race))
lm_Race_African_American_2007 <- lm(avg_combined_scores ~ African_American, data=data
summary(lm_Race_African_American_2007)
lm_Race_Asian_2007 <- lm(avg_combined_scores ~ Asian, data=data2007_Race)
```

```
summary(lm_Race_Asian_2007)
lm_Race_Caucasian_2007 <- lm(avg_combined_scores ~ Caucasian, data=data2007_Race)
summary(lm_Race_Caucasian_2007)
lm_Race_Hispanic_Latino_2007 <- lm(avg_combined_scores ~ Hispanic_Latino, data=data20
summary(lm_Race_Hispanic_Latino_2007)
lm_Race_ALL_2007 <- lm(avg_combined_scores ~ African_American+Asian+Caucasian+Hispani
```

2014 Regression on Education Attainment

FINISHED

```
%r
data2014_Education <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2014_data_Educat
    )
t(names(data2014_Education))
lm_Less_than_HS_2014 <- lm(avg_combined_scores ~ Less_than_HS, data=data2014_Educatic
summary(lm_Less_than_HS_2014)
lm_High_School_or_Equivalent_2014 <- lm(avg_combined_scores ~ High_School_or_Equivale
summary(lm_High_School_or_Equivalent_2014)
lm_Some_College_or_Associate_2014 <- lm(avg_combined_scores ~ Some_College_or_Associc
summary(lm_Some_College_or_Associate_2014)
lm_Bachelor_or_Higher_2014 <- lm(avg_combined_scores ~ Bachelor_or_Higher, data=data2
summary(lm_Bachelor_or_Higher_2014)
lm_Education_ALL_2014 <- lm(avg_combined_scores ~ Less_than_HS+High_School_or_Equival
    +Bachelor_or_Higher, data=data2014_Education)
```

2010 Regression on Education Attainment

FINISHED

```
%r
data2010_Education <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2010_data_Educat
    )
t(names(data2010_Education))
lm_Less_than_HS_2010 <- lm(avg_combined_scores ~ Less_than_HS, data=data2010_Educatic
summary(lm_Less_than_HS_2010)
lm_High_School_or_Equivalent_2010 <- lm(avg_combined_scores ~ High_School_or_Equivale
summary(lm_High_School_or_Equivalent_2010)
lm_Some_College_or_Associate_2010 <- lm(avg_combined_scores ~ Some_College_or_Associc
summary(lm_Some_College_or_Associate_2010)
lm_Bachelor_or_Higher_2010 <- lm(avg_combined_scores ~ Bachelor_or_Higher, data=data2
summary(lm_Bachelor_or_Higher_2010)
lm_Education_ALL_2010 <- lm(avg_combined_scores ~ Less_than_HS+High_School_or_Equival
    +Bachelor_or_Higher, data=data2010_Education)
```

2007 Regression on Education Attainment

FINISHED

```
%r
data2007_Education <- read.csv('/Users/Hamster/Desktop/Capstone_Data/2007_data_Educat
    )
t(names(data2007_Education))
lm_Less_than_HS_2007 <- lm(avg_combined_scores ~ Less_than_HS, data=data2007_Educatic
summary(lm_Less_than_HS_2007)
lm_High_School_or_Equivalent_2007 <- lm(avg_combined_scores ~ High_School_or_Equivale
summary(lm_High_School_or_Equivalent_2007)
lm_Some_College_or_Associate_2007 <- lm(avg_combined_scores ~ Some_College_or_Associc
```

```
summary(lm_Some_College_or_Associate_2007)
lm_Bachelor_or_Higher_2007 <- lm(avg_combined_scores ~ Bachelor_or_Higher, data=data2
summary(lm_Bachelor_or_Higher_2007)
lm_Education_ALL_2007 <- lm(avg_combined_scores ~ Less_than_HS+High_School_or_Equival
    +Bachelor_or_Higher, data=data2007_Education)
```

```
%r
```

READY