Final Report

due November 16, 2021 by 11:59 PM

Your names and team name here

Load Packages

Load Data

```
STAT_198_Food_Security_Dataset <-
  read_excel("~/R/Team-E-T/data/STAT 198 Food Security Dataset.xlsx", sheet = " County Projections")
```

Linear Regression Investigation

```
STAT_198_Food_Security_Dataset$`2013 Rural-urban Continuum Code` <- as.factor(STAT_198_Food_Security_Da

STAT_198_Food_Security_Dataset <- STAT_198_Food_Security_Dataset %>%
  mutate(`2013 Rural-urban Continuum Code`, Urban_cat = ifelse(`2013 Rural-urban Continuum Code`%in% c(

FI2021_cost_rural_hsdiploma <- linear_reg() %>%
  set_engine("lm") %>%
  fit(`2021 FI Percentage` ~ `2019 Cost per Meal` + `Urban_cat` + `Less than HS Diploma, 2015-9, Percen

tidy(FI2021_cost_rural_hsdiploma)
```

```
## # A tibble: 4 x 5
##   term                                  estimate std.error statistic  p.value
##   <chr>                                    <dbl>     <dbl>     <dbl>    <dbl>
## 1 (Intercept)                             0.197    0.0272       7.23 1.19e-10
## 2 `2019 Cost per Meal`                   -0.0192   0.00715     -2.69 8.54e- 3
## 3 Urban_catUrban                         -0.00703  0.00333     -2.11 3.71e- 2
## 4 `Less than HS Diploma, 2015-9, Percent`  0.00188  0.000475     3.97 1.39e- 4
```

```
FI2021_cost_rural_hsdiploma %>% tidy() %>% knitr::kable(caption="Main Linear Regression of Food Securit
```

Table 1: Main Linear Regression of Food Security in North Carolina

term	estimate	std.error	statistic	p.value
(Intercept)	0.1968006	0.0272384	7.225106	0.0000000
`2019 Cost per Meal`	-0.0191990	0.0071497	-2.685283	0.0085386
Urban_catUrban	-0.0070343	0.0033282	-2.113525	0.0371487
`Less than HS Diploma, 2015-9, Percent`	0.0018844	0.0004746	3.970117	0.0001387