Project Proposal

due October 11, 2021 by 11:59 PM

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Load Packages

```
library(tidyverse)
library(readxl)
library(tinytex)
```

Load Data

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

Introduction and Data, including Research Questions

(The introduction should introduce your general research question and your data (where it came from, how it was collected, what are the cases, what are the variables, etc.). Your research questions should be clearly specified. The motivation for your research question should be clear, with citations to relevant literature as appropriate.)

Glimpse

STAT 198 Food Security Dataset

variable	description
County	North Carolina County each row refers to
2019 FI Percent	Percent of County Residents Identified as Food Insecure in 2019
2019 Child FI Percent	Percent of County Residents under 18 years old Identified as Food Insecure in 2019

variable	description
2021 FI Percentage	Percent of County Residents Identified as Food Insecure in 2021
2019-2021 FI Percent Change	Change in Percent of County Residents Identified as Food Insecure from 2019 to 2021
2019-2021 Unemployment Change	Change in Percent of County Residents Identified as Unemployed from 2019 to 2021
2021 Child FI Percent	Percent of County Residents under 18 years old Identified as Food Insecure in 2021
2019-2021 Child FI Percent Change	Change in Percent of County Residents under 18 years old Identified as Food Insecure from 2019 to 2021
2019 Cost per Meal	Estimated Cost per County of the Cost of a Meal from 2019 to 2021
2013 Rural-urban Continuum Code	2013 Country Designation of Degree of Urbanization and Adjacency to a Metro Area
2013 Urban Influence Code	2013 Country Designation of Size of Largest City/Town and Adjacency to a Metro Area
Less than HS Diploma, 2015-9, Percent	2015-9 Estimate of County Residents with Less than a High School Diploma in Education
Only HS Diploma, 2015-9, Percent	2015-9 Estimate of County Residents with only a High School Diploma in Education
Some College Education Completed, 2015-9, Percent	2015-9 Estimate of County Residents with Some College Education Completed
College Degree Obtained, 2015-9, Percent	2015-9 Estimate of County Residents with an Associates, Bachelor's, or other Degree Obtained

(Please use `glimpse` for your data, uploaded into the data folder, here.)

```
glimpse(STAT_198_Food_Security_Dataset)
```

```
## Rows: 100
## Columns: 15
## $ County                                    <chr> "Alamance", "Alexa~
## $ `2019 FI Percent`                         <dbl> 0.137, 0.143, 0.18~
## $ `2019 Child FI Percent`                   <dbl> 0.192, 0.195, 0.26~
## $ `2021 FI Percentage`                      <dbl> 0.153, 0.160, 0.19~
## $ `2019-2021 FI Percent Change`             <dbl> 11, 12, 5, 14, 7, ~
## $ `2019-2021 Unemployment Change`           <dbl> 2.1, 2.3, 0.7, 2.9~
## $ `2021 Child FI Percent`                   <dbl> 0.217, 0.222, 0.28~
## $ `2019-2021 Child FI Percent Change`       <dbl> 13, 14, 4, 13, 8, ~
## $ `2019 Cost per Meal`                      <dbl> 3.15, 2.92, 2.83, ~
## $ `2013 Rural-urban Continuum Code`         <dbl> 3, 2, 9, 6, 7, 8, ~
## $ `2013 Urban Influence Code`               <dbl> 2, 2, 10, 4, 10, 7~
## $ `Less than HS Diploma, 2015-9, Percent`   <dbl> 13.694117, 17.6091~
```

```
## $ `Only HS Diploma, 2015-9, Percent`                  <dbl> 27.65582, 38.65881~
## $ `Some College Education Completed, 2015-9, Percent` <dbl> 33.81207, 29.52250~
## $ `College Degree Obtained, 2015-9, Percent`          <dbl> 24.83799, 14.20957~
```

```
view(STAT_198_Food_Security_Dataset)
```

Data Analysis Plan

(Specify the outcome (response, Y) and predictor (explanatory, X) variables you will use to answer your question, as well as the comparison groups you will use, if applicable. You may include very preliminary exploratory data analysis, including some summary statistics and visualizations, along with some explanation on how they help you learn more about your data. Note the statistical method(s) that you believe will be useful in answering your question(s). What results from these specific statistical methods are needed to support your hypothesized answer?)