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MGSC 310
Final Project Outline

For our final project, we aim to dissect and understand the dynamics of the housing market by analyzing public housing data. We will delve into how external factors such as immigration patterns and interest or lending rates, as well as internal ones like consumer characteristics and demographics, influence purchasing behaviors. The objective question that we will be answering is:

How do various, economic, demographic, and social factors influence housing market dynamics?

We will first begin by cleaning and creating a new dataset using data from various sources in order to move forward with model building.

Kevin

Business Question: how are housing purchases changing?

Model: Using lending rates interest rates and housing purchases, your model will seek to predict how the housing market will change in the coming year.

Matthew

Business Question: How do interest rates (housing prices) affect movement within the United States to and from states?

Model: Running four different models, using data about immigration to and from states and regional inflation or housing data, try to capture the relationship and compare them.

We're envisioning to run four different models, using data about immigration to and from states and regional inflation or housing data, try to capture the relationship and compare them. We plan to run a multiple linear regression model to show the migration patterns with the interest rates and housing prices affect these outcomes.

Hillary

Business Question: How do consumer traits and demographic data (e.g. employment/unemployment, median wage, ethnicity, etc) affect purchasing choices/behavior in California?

Model: Analyze how these traits on average shift choices in purchases of housing in California.

To answer this question, I will run a multiple linear regression model on the purchasing choice (yes/no) based on specific independent variables.

Datasets we looked at:

<https://fred.stlouisfed.org/tags/series?t=real+estate#:~:text=%23%20%E3%80%9012%E2%80%A0Real%20Estate%20,graph%2C%20and%20track%20economic%20data>

<https://fred.stlouisfed.org/series/COMREPUSQ159N>

<https://fred.stlouisfed.org/series/CREACBM027NBOG>

<https://www.fhfa.gov/DataTools/Downloads>

<https://www.fhfa.gov/DataTools/Downloads/Pages/House-Price-Index-Datasets.aspx>

<https://www.fhfa.gov/DataTools/Downloads/Pages/Public-Use-Databases.aspx>

<https://www.fhfa.gov/DataTools/Downloads/Pages/Fair-Lending-Data.aspx>

https://www.huduser.gov/portal/pdrdatas_landing.html#dataset-title

<https://www.census.gov/topics/housing/data/datasets.html>

<https://fred.stlouisfed.org/searchresults?st=housing&t=monthly%3Bmei%3Busa&rt=monthly&ob=sr>

<https://fred.stlouisfed.org/series/HOSINVUSM495N>

<https://fred.stlouisfed.org/series/EXHOSLUSM495S>

<https://fred.stlouisfed.org/series/ETOTALUSQ176N>

<https://fred.stlouisfed.org/series/FIXHAI>