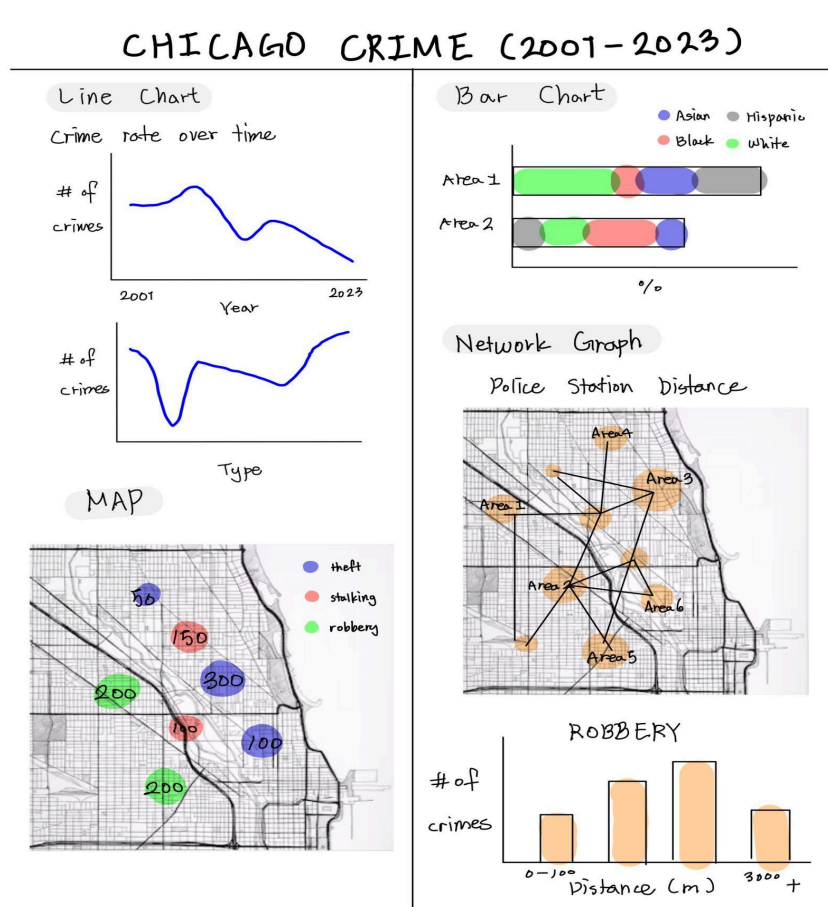


## Group N Process Book

Title of the project: Chicago Crimes

Members: Camille Mancuso, Cara Xu, Herbert Dong, SooYeon Choi

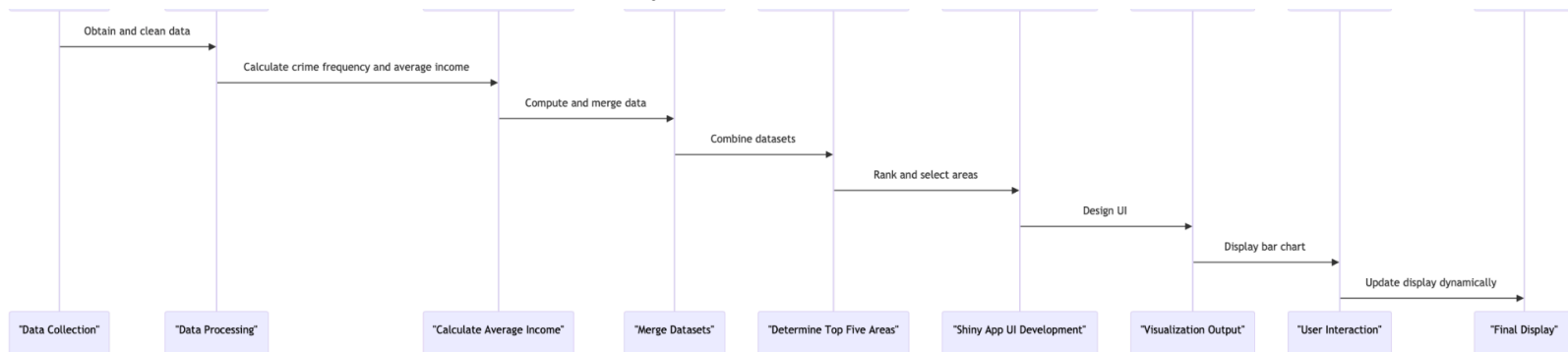
### ❖ Initial Plan for Visualization Models



- Line chart to visualize the changes in crime frequency across various crime types over time
- Bar charts to show the racial makeup of the most and least frequent areas for each particular crime type
- Box plots to show the median household income of the most and least frequent areas for each particular crime type
- Interactive map to visualize the distribution of crime frequency and types across different locations with color differentiation
- Density map to visualize the relationship between crime rates and community area
- Connection graph (Networks or Chords) to visualize the connection between crimes and social factors

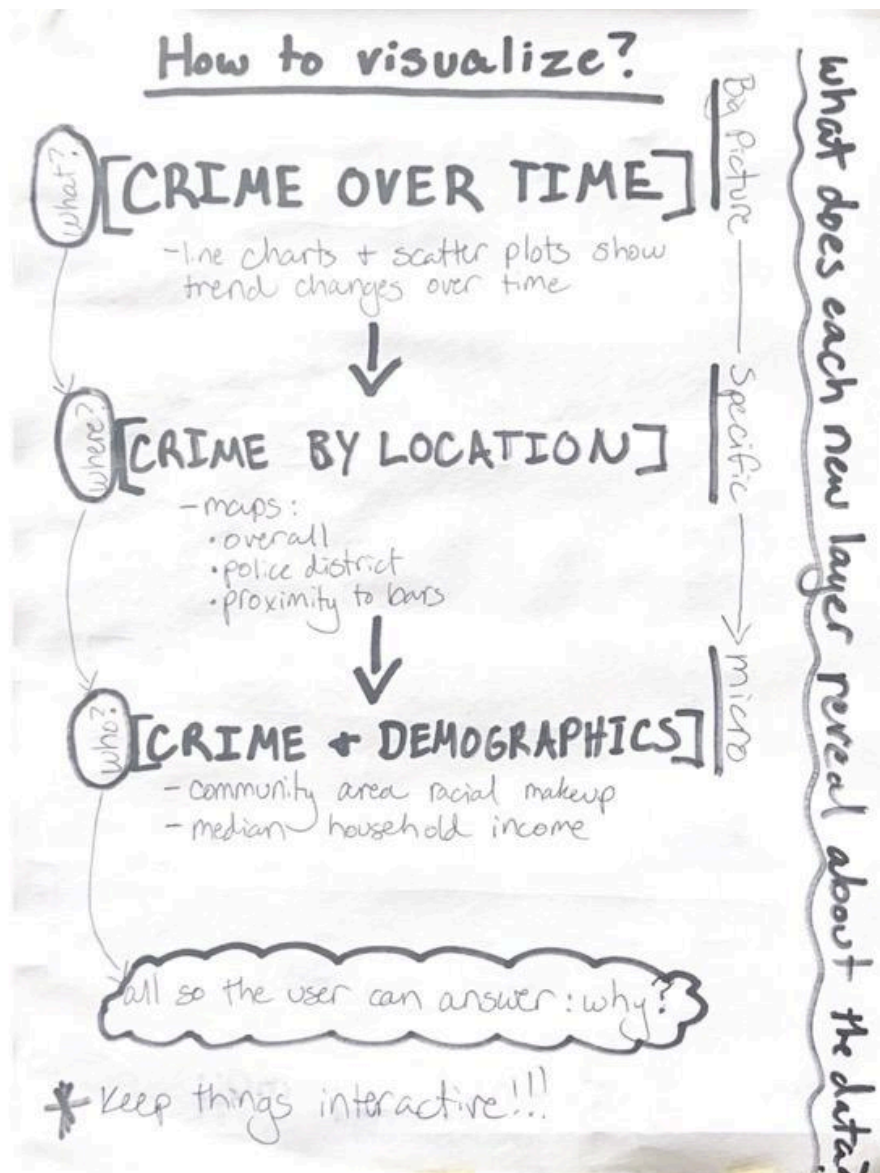
❖ Final Version includes (\*\*using Shiny App):

- Line chart
  - Displaying Chicago's crime rates over time (2001-present), also marking the significant events during the period
  - Displaying the overall crime rates of the selected community area, years from 2020 to the present
    - Multiple areas can be selected for comparison
- Scatter plot
  - Displaying crime frequencies over time in Chicago (2001-2023) of selected type of crime
- Bar charts
  - Displaying the distribution of primary crime types in Chicago (top 10) of each selected year
  - Visualizing the proportional demographics of the selected community area
    - Multiple areas can be selected for comparison
  - Visualizing the distances between crime locations and the nearest police stations, categorized into different distance ranges
    - Multiple police districts & crime types can be selected
  - Displaying the distances between crime scenes and the nearest bars
    - Multiple crime types can be selected
  - Visualizing crime frequency of top five Chicago community areas with the highest crime rates, each bar representing average per capita income of each area
    - Multiple crime types can be selected



● Interactive maps

- Visualizing the locations of the crime events for the selected year
  - A brief description of the event
  - Text with the count of the selected crime type in the year
- Visualizing specific police district and crime types (2020-2023)
- Visualizing types of crimes that occurred in public areas potentially influenced by alcohol use



- How to get from macro data to allow users to draw conclusions?
- Think of each app as a new layer being uncovered: place for further analysis and exploration, place for more questions to be asked/answered, new perspective to be unlocked
- All building off of previous information
- Macro → specific → micro
  - Time → place → demographics
  - What? → Where? → Who?