

Project 3 Proposal

Project Title: Human Trafficking Incidences in the United States

USC - Data Analytics Boot Camp

Feb 2022

The goal of this project is to show the density & counts of recorded human trafficking reports per state from 2015-2020 with visuals created based on data retrieved from FBI reports. We will be telling a story with data visualizations and focusing on providing users with interactive means to explore the data themselves.

Team:

- Alexandra Baker
- Farimah Shirmohammadi
- Erika Gonzalez
- Jordan Janer

Research Questions:

What are the actual counts of human trafficking per state? What are the top 5 states with the most occurrence of human trafficking? How have the rates of occurrence changed throughout the years? Which offense subcategory type has the higher rate of occurrence? Is there any correlation between regional economic metrics such as personal income per capita and crime incidences?

GitHub Repo:

<https://github.com/bakeralexan/human-trafficking>

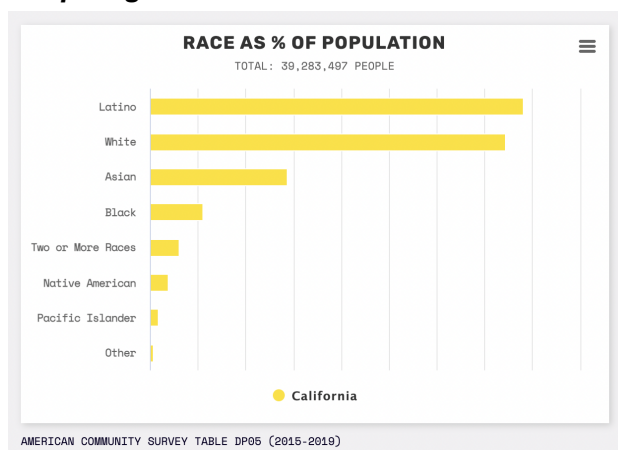
Data Sets:

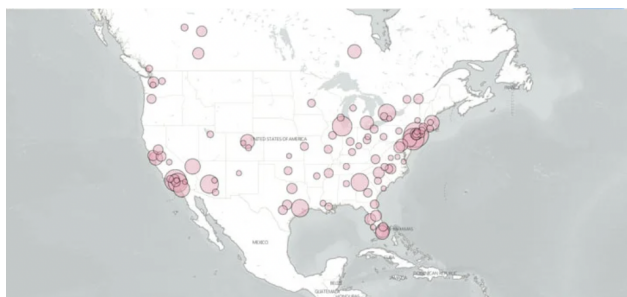
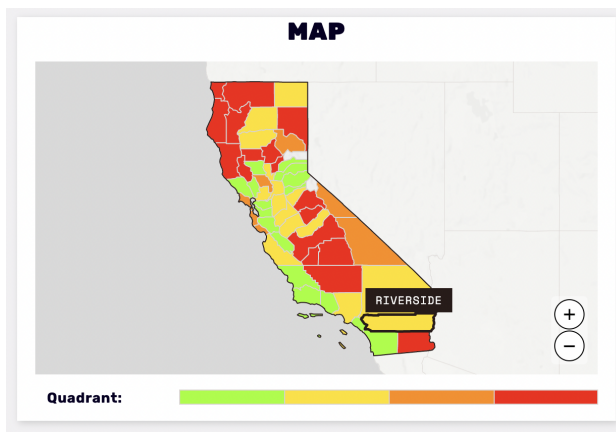
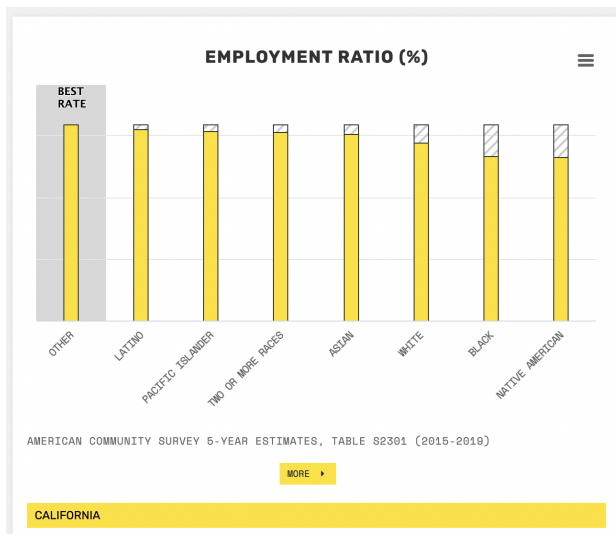
- 1) **Federal Bureau of Investigation Crime Data Explorer**
<https://crime-data-explorer.fr.cloud.gov/pages/home>
- 2) **Bureau of Economic Analysis U.S. Department of Commerce**
Annual Personal Income by County
<https://apps.bea.gov/regional/downloadzip.cfm>

Outline:

- ETL
 - Extract: download data from FBI crime data as csv, convert it to json, save it as a MongoDB database
 - Python Flask
 - Connect database to .js file
 - Will be using “react” for the JS library that we did not cover in class
- Visualizations
 - Will use Bar or Bubble graph; may use bubble graph for counties human trafficking rate throughout the years; bubbles could be color coded based on state. If it will be a very busy graph then we will switch to a heat map for better visuals.
 - Line Chart (maybe better to do a weighted average based on state population instead of just arithmetic mean)
 - Average count data in the whole US across 5 years
 - Maybe by type of count (actual count, juvenile count)
 - Linear Regression Analysis
 - Is there any association between personal income per capita and crime rates
 - Map
 - Drop Down
 - City/County/State level
 - Year
 - 5 years
 - Or the most recent year

“Inspiring” Visualizations:



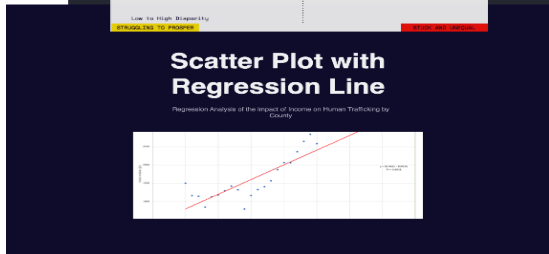
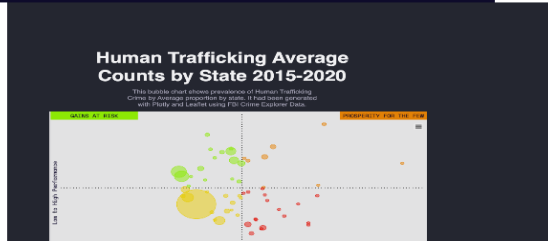


Metadata ScreenShot:

Data shown is FBI CSV

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1 DATA_YEAR,ORI,PUB_AGENCY_NAME,PUB_AGENCY_UNIT,AGENCY_TYPE_NAME,STATE_ABBR,STATE_NAME,DIVISION_NAME,COUNTY_NAME,REGION_NAME,POPULATION_GROUP_CODE,POPULATION_U
2 2016,M00480600,Independence,,City,MO,Missouri,West North Central,JACKSON,Midwest,"100,000-249,000","Cities from 100,000 thru 249,999",81,Human Trafficking,C
3 2016,TX2201200,Fort Worth,,City,TX,Texas,West South Central,PARKER; DENTON; TARRANT,South,"500,000-999,999","Cities from 500,000 thru 999,999",82,Human Traf
4 2016,TX2270100,Austin,,City,TX,Texas,West South Central,WILLIAMSON; TRAVIS,South,"500,000-999,999","Cities from 500,000 thru 999,999",82,Human Trafficking,I
5 2019,NV0020100,Las Vegas Metropolitan Police Department,,City,NV,Nevada,Mountain,CLARK,West,"1,000,000","Cities 1,000,000 or over",81,Human Trafficking,Comm
6 2017,AZ0070500,Chandler,,City,AZ,Arizona,Mountain,MARICOPA,West,"100,000-249,000","Cities from 100,000 thru 249,999",81,Human Trafficking,Commercial Sex Act
7 2018,ND0090200,Fargo,,City,ND,North Dakota,West North Central,CASS,Midwest,"100,000-249,000","Cities from 100,000 thru 249,999",81,Human Trafficking,Commerc
8 2020,GA0380100,Newnan,,City,GA,Georgia,South Atlantic,COWETA,South,"25,000-49,999","Cities from 25,000 thru 49,999",81,Human Trafficking,Commercial Sex Acts
9 2020,GA0440200,DeKalb County Police Department,,County,GA,Georgia,South Atlantic,DEKALB,South,"100,000","MSA counties 100,000 or over",81,Human Trafficking,I
10 2020,GA0440200,DeKalb County Police Department,,County,GA,Georgia,South Atlantic,DEKALB,South,"100,000","MSA counties 100,000 or over",82,Human Trafficking,I
11 2020,GA0440200,DeKalb County Police Department,,County,GA,Georgia,South Atlantic,DEKALB,South,"100,000","MSA counties 100,000 or over",81,Human Trafficking,I
12 2020,GA0440200,DeKalb County Police Department,,County,GA,Georgia,South Atlantic,DEKALB,South,"100,000","MSA counties 100,000 or over",81,Human Trafficking,I
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Sketch of Final Design:



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