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### **Universal Basic Income**

Spring 2023 CS506 Data Science

#### **Project Description**

This project seeks to understand what a universal basic income program should look like for Boston by looking at the number of people under the poverty line, what the different levels of poverty are, which public assistance programs are being utilized and the amount of assistance, and how much money per household could have the greatest positive impact. Boston City Councilor Kendra Lara has the opportunity to provide 1000 of these people with assistance so the analysis from this project can be used to help inform her of a potential selection process for. There also needs to be consideration of income that places participants outside of poverty and ineligible for program assistance, but could still benefit from monetary support. **The primary output for this project is to use this data analysis to provide the Councilor with a recommendation for what criteria to use to select the participants of the universal basic income pilot program in order to have a sustained impact on lifting people out of poverty. The analysis will help determine how many people fall within the category of individuals who, with assistance, could benefit from this program.**

#### **Project Steps**

**Key Initial Steps**

1. Review Project Description and determine questions or clarifications needed from the client.
2. Create a work plan with your team and determine the breakdown of tasks into weekly sprints on the Trello board.

**Using the Data Sets & Sources**

1. The data for this project includes
   * 1. Public assistance programs includes: Transitional Aid to Families with Dependent Children (TAFDC); Emergency Aid to the Elderly, Disabled and Children (EAEDC); Supplemental Nutrition Assistance Program (SNAP):
        1. [DTA Data and Research | Mass.gov](https://www.mass.gov/dta-data-and-research)
           1. Census income brackets/ poverty level: <https://data.census.gov/table?q=DP03>
           2. [DTA\_ZIPCODE\_Report\_DEC\_2022.v2.xlsx](https://docs.google.com/spreadsheets/d/1EHLDQfJK_0Oxvz6Mi2mx_mdzFT9gmUuw/edit#gid=1234606162)

[Food Stamps/Supplemental Nutrition Assistance Program (SNAP) | American Community Survey | U.S. Census Bureau](https://www.census.gov/acs/www/about/why-we-ask-each-question/food-stamps/)

* + - 1. [Shapefile](https://data.boston.gov/dataset/city-council-districts-effective-for-the-2023-municipal-election)
      2. WIC data
         1. <https://www.fns.usda.gov/data/october-2022-keydata-report>
         2. [WIC](https://dphanalytics.hhs.mass.gov/ibmcognos/bi/?perspective=authoring&pathRef=.public_folders%2FMEPHTN%2Fdph%2FPHIT-Reports%2Fwic-81&id=i0C2279769C8047BFA64CB0ECA3D4E48C&ui_appbar=false&ui_navbar=false&objRef=i0C2279769C8047BFA64CB0ECA3D4E48C&action=run&format=HTML&cmPropStr=%7B%22id%22%3A%22i0C2279769C8047BFA64CB0ECA3D4E48C%22%2C%22type%22%3A%22report%22%2C%22defaultName%22%3A%22wic-81%22%2C%22permissions%22%3A%5B%22execute%22%2C%22read%22%2C%22traverse%22%5D%7D)
      3. Section 8 Housing Assistance
         1. [Assisted Housing: National and Local | HUD USER](https://www.huduser.gov/portal/datasets/assthsg.html#2009-2021_query)
         2. [MDAT](https://data.census.gov/mdat/#/search?ds=ACSPUMS1Y2021&cv=HINS4,HUPARC,HUPAOC,HHT&rv=FS,ucgid,HUPAC&wt=WGTP&g=0400000US25_7950000US2503301,2503302,2503303,2503304,2503305,2503306) Census attributes
      4. Background Reading on SNAP participation and performance: [DTA Performance Scorecards | Mass.gov](https://www.mass.gov/lists/dta-performance-scorecards)
      5. <https://www.census.gov/quickfacts/fact/dashboard/MA/HSD310221>
      6. <https://www.mass.gov/info-details/municipal-finance-visualizations#municipal-financial-self-assessment->

**Part 1: Analysis & Tasks**

1. Establish participants in each assistance program into one centralized sheet
   1. Consider including
      1. Demographics
         1. Race/Ethnicity, Gender, Neighborhoods/County
      2. Income

**Questions**

1. How many people participate in assistance programs? **(Team 2, Team 1)** 
   1. Transitional Aid to Families with Dependent Children (TAFDC);
   2. Emergency Aid to the Elderly, Disabled and Children (EAEDC);
   3. Housing Assistance
   4. Supplemental Nutrition Assistance Program (SNAP)
      1. [Food Stamps/Supplemental Nutrition Assistance Program (SNAP) | American Community Survey | U.S. Census Bureau](https://www.census.gov/acs/www/about/why-we-ask-each-question/food-stamps/)
      2. <https://docs.google.com/spreadsheets/d/13m4-QOJCGurJVBHaIEnriR5JccJ8CTA9/edit#gid=136051010>
      3. <https://docs.google.com/spreadsheets/d/1G1zPAKq0tWYHO1A_wyJAXau4AoE3edrAOz4nuhOH9kU/edit?usp=sharing>
      4. <https://data.census.gov/table?tid=ACSST5Y2021.S2201&hidePreview=true>
      5. <https://aspe.hhs.gov/2021-poverty-guidelines>
      6. <https://data.census.gov/table?q=S2201:+FOOD+STAMPS/SUPPLEMENTAL+NUTRITION+ASSISTANCE+PROGRAM+(SNAP)&g=1600000US2507000>

1. What is the income distribution for Boston residents living poverty line **(team 5, team 2)** 
   1. Census income brackets/ poverty level: <https://data.census.gov/table?q=DP03>
   2. Income range: <https://www.huduser.gov/portal/datasets/il/il2022/select_Geography.odn>
   3. [https://data.census.gov/table?g=0400000US25\_310XX00US14460&tid=ACSST1 Y2021.S1702](https://data.census.gov/table?g=0400000US25_310XX00US14460&tid=ACSST1Y2021.S1702)
   4. <https://data.census.gov/table?g=0400000US25_310XX00US14460&tid=ACSST1Y2021.S1702>
   5. <https://data.census.gov/table?g=310XX00US14460&tid=ACSST1Y2021.S1701>
2. How many people participate in assistance programs - focus on WIC, Snap, and Housing assistance (section 8)? **(team 5)** 
   1. WIC
   2. SNAP
   3. Housing
3. How much assistance is provided to residents at different income levels (under poverty level)
4. What amount would pull the largest number of households out of the poverty level without sacrificing existing assistance benefits?

**Part 2: Extension Data Sets & Sources**

1. This next part of this project is to get creative with additional data that you think would tell an interesting story. This extension should be something your team finds compelling. You will create a mid-semester [proposal](https://docs.google.com/document/d/1EFkQJpOBXHbsJj7LdFNFHaMBzaAt69HARnmcam-slpU/edit?usp=sharing) for this extension project that the client will approve.These may be helpful datasets or topics to consider, but you are welcome to research other datasets and sources:
   1. Potential Data Sets
      1. Social Security/ VA/ Disability Benefits?
      2. [Redlining](https://www.arcgis.com/home/item.html?id=263b64f4edf04a589d675d97964f1bea)
      3. [Eviction Diversion Initiative Dashboard | Mass.gov](https://www.mass.gov/info-details/eviction-diversion-initiative-dashboard)
2. Discuss topics your team is interested in and research other datasets/sources (be creative!)
3. Create a proposal that contains:
   1. Extension pitch and rationale
   2. Questions to be answered for analysis
   3. Datasets & sources you will be using
4. Pitch the proposal to the client
   1. Make any edits/updates as necessary
   2. Get client’s approval
5. Analysis
   1. Analyze the datasets and create visualizations

#### **Expected Final Deliverable**

1. Create a report with key visualizations and answers to your client’s questions.

#### **Contact Information**

| **Role** | **First Name** | **Last Name** | **Email** |
| --- | --- | --- | --- |
| Client - Organization Name | Kendra | Lara |  |
| Client - Chief of Staff | Lee | Nave |  |
| Spark! Support |  |  |  |
| Spark! EIR |  |  |  |
| Class Instructor |  |  |  |
| PM |  |  |  |
| TE |  |  |  |
| Team Lead [if applicable] |  |  |  |
| Teammate |  |  |  |
| Teammate |  |  |  |
| Teammate |  |  |  |

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## Preplanning:

[Team Rep Availabilities](https://www.when2meet.com/?18829623-fqEfc)

[Weekly team meeting](https://www.when2meet.com/?18753083-xJRtb): Fridays 1:30PM

[Biweekly client meeting](https://www.when2meet.com/?18788223-iBiB6): Tuesdays 2:15PM

[Councilor Lara’s Schedule](https://calendly.com/kendralara/1hrvirtual?month=2023-02)

## Links:

[Trello Boards](https://trello.com/b/BgaTNS7X/universal-basic-income-councilor-lara)**:** <https://trello.com/b/BgaTNS7X/universal-basic-income-councilor-lara>

[Google Drive](https://drive.google.com/drive/folders/1E0ZERqhhmIP8O8d_1afhestK6h2mNn4u?usp=share_link)

[Deliverables, assignments and syllabus](https://gallettilance.github.io//deliverables/)

## Meeting Notes

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### 2/24 - Weekly Meeting 2

Agenda:

1. Project info
2. Q & A
3. Trello Board

Questions:

1. Data in PDF, how to parse?
   1. Team 1 parsed some data, and it is uploaded to the Drive
2. Questions about census data

Recap:

1. Tip to start with analyzing: break the big questions into smaller ones and find revalent data to that smaller questions
2. Follow instructions to update Trello Broad
   1. Specify who is doing what tasks
3. List your questions if you have any
4. Upload scrum for this week
5. Client meeting next Tuesday at 1:30
6. Deliverable Due: Mar 1st

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### 2/17 - Meeting 1: Kickoff

Attendance (absence):

Group 1 absence : all members present

Group 2 absence: June Wunder (Family emergency)

Group 3 absence: all members present

Group 4 absence: all members present

Group 5 absence: john anthony, yusra nasir, xiaoyu cui, zhiqi chen

To do:

* Check if all members are in slack, github, trello and Google Drive already
* Submit Weekly scrum to Drive, and attach the scrum link to the Trello board
  + When creating a new card name your scrum with name format [Team#\_scrum\_2/16] . For example, [Team3\_scrum 3/1]
* Start reading the project description and context, then start analyzing the data
* Prepare any questions for client meeting next Tuesday.

## Solutions Attempt:

1. How many people participate in assistance programs? **(Team 2, Team 1)** 
   1. Transitional Aid to Families with Dependent Children (TAFDC);
   2. Emergency Aid to the Elderly, Disabled and Children (EAEDC);
   3. Housing Assistance
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      1. [Food Stamps/Supplemental Nutrition Assistance Program (SNAP) | American Community Survey | U.S. Census Bureau](https://www.census.gov/acs/www/about/why-we-ask-each-question/food-stamps/)
      2. <https://docs.google.com/spreadsheets/d/13m4-QOJCGurJVBHaIEnriR5JccJ8CTA9/edit#gid=136051010>
      3. https://docs.google.com/spreadsheets/d/1G1zPAKq0tWYHO1A\_wyJAXau4AoE3edrAOz4nuhOH9kU/edit?usp=sharing