R Script Contextual Process Draft

Team 7

December 13th

INFM 600

This is an interim deliverable to demonstrate progress on your project; your script should include comments identifying what each series of steps in the script is intended to do. In general, you're expected to run some basic descriptive statistics (distributions, means, etc.) that help identify problems with the data or assumptions; if your team has the skills and data for it, you can go a bit further with ANOVA or regression analyses (which will not be covered in class). Again, this is a draft deliverable, so it's a good opportunity for feedback if you're getting stuck or need suggestions on scaling up or scaling back your planned analysis.

* [Maryland Department of Planning, Maryland Counties Socioeconomic Characteristics](https://docs.google.com/spreadsheets/d/1T9hFxLfqt0jRYdH_gUtKpQBmbmgqHzoFNvWyBDAevsk/edit#gid=724077778)
  + For this dataset, we will filtering
    - **FEMALE**
    - WOMEN OF COLOR (WOC), which will be:
      * **Black Alone**
      * **Asian Alone**
      * **American Indian/Alaska Native Alone**
      * **Native Hawaiian/Pacific Islander Alone**
      * **Some Other Race Alone**
      * **Two or More Races**
      * **Hispanic or Latino (of any race)**
  + After we have set the data to reflect WOC we can now highlight a few columns like:
    - **Total Households**
    - **Employment Status of the Population 16 years and over**
    - **Employed**
    - **Unemployed**
    - **Unemployment Rate**
    - **Median Household Income ($)**
    - **Percent Families in Poverty**
  + We will be first highlighting this information from just PG county. This should probably just be an infographic about WOC in PG county. This will help us build a profile for the potential need in PG for WOC to do this Bootcamp classes.
  + Then we will compare those same factors (**Total Households, Employment Status of the Population 16 years and over, Employed, Unemployed, Unemployment Rate, Median Household Income ($), Percent Families in Poverty**) to the rest of the counties as a whole. This will help with our argument that PG is a great place to do this because of its the demographics compared to all the rest of Maryland counties.
* [Montgomery County, Maryland Tuition Assistance](https://docs.google.com/spreadsheets/d/1th7odoGOpUOHFa3UCslWD2CeQ_LTUKZu1pzKq4UKqWU/edit#gid=243243164)
  + “This dataset includes a list of classes approved and paid through the County tuition assistance program, including the title and description of the course, the school the course will be taken at, the degree this class curriculum is a part of, the Department and title of the requester, the dollar amount reimbursed to the employee. Update Frequency: Twice a Year” - A QUOTE FROM THE WEBSITE
  + Here, we will be using this data to show of Montgomery County does tuition assistance as an example for PG. Hopefully, we will show how cost effective it is by highlighting a few things for the data.
  + For this dataset, we will be filtering
    - **MAJOR**
      * Computer Science
      * Computer Systems Management
      * Information Technology
      * Professional/Technical
    - **DEGREE**
      * Certificate
      * Other
      * Non-Degree
  + What we will be highlighting from this dataset is
    - **DEPARTMENTS**
      * How many departments requested tuition assistance?
        + (It will be 6)
      * Which departments requested tuition assistance?
        + (Correction & Rehabilitation, Health & Human Services, Housing & Community Affairs, Police, Technology Services, Transportation)
      * How many times has each department requested tuition assistance?
      * How much did each department need for tuition assistance?
    - **COST**
      * How much was the average cost of IT classes
      * How much was the average cost of a NON-IT class
        + Here we will filter all **MAJOR** EXPECT Computer Science, Computer Systems Management, Information Technology, Professional/Technical BUT keeping the **DEGREE (**Certificate, Other, Non-Degree) the same.
    - **DEGREE**
      * We will also want to highlight out what type and how many of **DEGREE** people are getting from Certificate, Other, Non-Degree in IT related **MAJOR**
* [Maryland State Data Center Department of Planning American Community Survey 2006-2010 EEO Detailed Report - Persons in Civilian Labor Force by Residence, Sex and Race:Ethnic Origin](https://docs.google.com/spreadsheets/d/1a7ct3IdML1kzACNbdgUiatYYUZF-wwQkQSCDAgwXlVc/edit#gid=395663671)
  + Here, we will be filtering **OCCUPATIONAL CATEGORIES: / ALL OCCUPATIONS** to reflect IT-related careers. *\*\*\*\* Note that there are some IT related feild that fall other other categories. We will NOT be using those. Just those carers that fall under “Computer and Mathematical Occupations”. Please visit the link (*[*https://www.bls.gov/oes/2017/may/oes\_stru.htm#top*](https://www.bls.gov/oes/2017/may/oes_stru.htm#top)*) to for reference*
  + IT related field will be coded as SOC 15-0000 Computer and Mathematical Occupations. Here is the breakdown of the categories we will be highlighting. Basically, everything starting with SOC 15.
    - SOC 15-0000 Computer and Mathematical Occupations
      * SOC 15-1100 Computer Occupations
      * SOC 15-1110 Computer and Information Research Scientists
      * SOC 15-1111 Computer and Information Research Scientists
    - SOC 15-1120 Computer and Information Analysts
      * SOC 15-1121 Computer Systems Analysts
      * SOC 15-1122 Information Security Analysts
    - SOC 15-1130 Software Developers and Programmers
      * SOC 15-1131 Computer Programmers
      * SOC 15-1132 Software Developers, Applications
      * SOC 15-1133 Software Developers, Systems Software
      * SOC 15-1134 Web Developers
    - SOC 15-1140 Database and Systems Administrators and Network Architects
      * SOC 15-1141 Database Administrators
      * SOC 15-1142 Network and Computer Systems Administrators
      * SOC 15-1143 Computer Network Architects
    - SOC 15-1150 Computer Support Specialists
      * SOC 15-1151 Computer User Support Specialists
      * SOC 15-1152 Computer Network Support Specialists
    - SOC 15-1190 Miscellaneous Computer Occupations
      * SOC 15-1199 Computer Occupations, All Other
  + Now that we have filtered the data to reflect just IT jobs (SOC 15-0000), we can now do some comparative analysis. (The data will just filter down to 14 IT job fields in PG County). I am assuming that we will see WOC underrepresented in IT related work. We can run some of the data to reflect all of the IT jobs then we can pick a few of the types of IT jobs to highlight and compare.
    - General comparisons/analysis
      * Total people in PG working IT-related jobs
      * IT demographics by
        + race
        + gender
        + race with gender (like women of color)
    - Specific comparisons/analysis
      * Job categories with the most and least women of color
* [Bureau of Labor Statistics Employment Projections - Occupations with the most job growth.XLSX](https://docs.google.com/spreadsheets/d/11XZg4Ot--Uy8iJb8XtW49QLBLV0T7GRzA_x_14QcjFM/edit#gid=1417492938)
  + IT related field will be coded as SOC 15-0000 Computer and Mathematical Occupations. Here is the breakdown of the categories we will be highlighting. Basically, everything starting with SOC 15.
* Table 1.1 Employment by major occupational group, 2008 and projected 2018
* Table 1.2 Employment by occupation, 2008 and projected 2018
* Table 1.3 Fastest growing occupations, 2008 and projected 2018
* Table 1.4 Occupations with the largest job growth, 2008 and projected 2018
* Table 1.7 Occupational Employment and Job Openings Data, 2010-20, and worker characteristics, 2010
* Table 1.11 Educational attainment for workers 25 years and older by detailed occupation, 2009
* Table 1.12 Education and training classification by detailed occupation, 2010

**PG County 2018-Fiscal-Year-Approved-Budget**

* <https://www.princegeorgescountymd.gov/DocumentCenter/View/18004/Social-ServicesPDF>
* **DEPARTMENT OF SOCIAL SERVICES:** 2018 Fiscal Year Total Approved Budget
  + Compare Total Budget to Work Opportunities Budget
* <https://www.princegeorgescountymd.gov/DocumentCenter/View/18013/Grant-ProgramsPDF>
* **DEPARTMENT OF SOCIAL SERVICES:** 2018 Fiscal Year Approved Budget for Grants
  + Budget for Grants vs Work Opportunities Budget

**Word Count: 980**