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| PROJECT PROPOSAL - Group PROJECT 2  Relationship Between Income Unemployment Diversity in USA |
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**Relationship Between Income Unemployment Diversity in USA**

**Project Proposal for Group Project 2**

INSTRUCTIONS

Summary page:

a. Project title: ETL Project Income Unemployment Diversity

b. Name of implementing person(s): Team Purple

c. Project location: Data Analytics Boot Camp - WashU

d. Proposed starting date: 08/11/2019

e. Project duration: 2 weeks

PROJECT REQUIREMETS:

Project Description:

* Your task is to **tell a story** through data visualizations.
* Focus on providing users an **interactive means** to explore data themselves.
* Prepare a **10-minute presentation** that lays out your theme, coding approach, data
* munging techniques, and final visualization.
* You may choose a project of any theme, but we encourage you to **think broadly.**
* You will have **ample time in class** to work with your group, but expect to put in **hours outside of class** as well.

Specific Requirements of the Project:

* Your visualization must include a Python Flask powered RESTful API, HTML/CSS,

JavaScript, and at least one database (SQL, MongoDB, SQLite, etc.).

* Your project should fall into one of the below four tracks:
  + A custom “creative” D3.js project (i.e., a nonstandard graph or chart)
  + A combination of web scraping and Leaflet or Plotly
  + A dashboard page with multiple charts that update from the same data
  + A “thick” server that performs multiple manipulations on data in a database prior to visualization (must be approved)
* Your project should include at least one JS library that we did not cover.
* Your project must be powered by a data set with at least 100 records.
* Your project must include some level of user driven interaction (e.g., menus,
* dropdowns, textboxes).
* Your final visualization should ideally include at least three views.

The Project Proposal for the Group Project a has three sections:

I. What Story are we trying to tell from the data?

II. What tools are we using to implement the story we are telling?

III. How we implement the process? What are the steps?

I. WHAT STORY ARE WE TRYING TO TELL FROM THE DATA?

This section should provide a brief introduction on what story we are telling, what data sets we are using and how we select our data sets and data sources.

Also, how to find different data sources and make a relationship in between them. The main reason behind that is, finding a primary key or a composite key which is a combination of two unique keys, is crucial in this step.

The first step should also describe:

a. Select a topic

b. Find different data sources

c. Look for different data sets which needs in the project

d. Define the primary key or the composite key

e. Look for more relations or relational data sets which will give a meaning to the project

f. Finalize the data sets

g. Finalize what you would like to implement in this project

h. Sketch the ideal visuals

Finally, the extract step should include, the defined data sets, primary keys and the what the final project objective.

Note: Data clean up and analysis is the main focus in this section. That includes cleaning the data sets, renaming the column names, setting the indexes, extracting just the needed columns & etc.

II. WHAT TOOLS ARE WE USING TO IMPLEMENT THE STORY WE ARE TELLING?

This section should discuss what tools we will be using to implement the project. What Front end tools, what back end tools, the database and etc.

Front End Tools: HTML, CSS, BootStrap, JavaScript

Data Visualization Tools: API, JavaScript – D3, leaflet

Database: PostgreSQL or MongoDB or SQLite

Our project focus on these areas:

○ A custom “creative” D3.js project (i.e., a nonstandard graph or chart)

○ A combination of web scraping and Leaflet or Plotly

○ A dashboard page with multiple charts that update from the same data

○ The extra JS library we are using is XX

○ Our data sets include more than 1M rows.

○ User driven interactions include menus, dropdowns and textboxes

○ Our website includes 5 views.

III. HOW WE IMPLEMENT THE PROCESS? WHAT ARE THE STEPS?

Specifically, the discussion should indicate how we will proceed with the project.