DISPARITIES FOR WOMEN IN TECH 11/18/2023

To: Professor Block
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Data questions:

1. What are the best tech companies for women?
    a. What are characteristics of the company that attract women (pay, location, culture, leadership, etc.)?
2. Number of women in tech field across countries?
3. Gender pay-gap for women in tech across countries?
    a. Average wages for each gender
4. Proportion of women with tech degrees vs. men with tech degrees?
5. Percentage of women in tech vs men in tech?
6. Percentage of women in leadership position in tech vs men?
7. Number of female-run tech companies?
    a. Profitability of female run vs male run
    b. Employee satisfaction ratings
    c. Pay disparities
8. Demographics of women in tech?
    a. Single parent, Parent, Single, Married, etc.
    b. Compared to demographics of men

Data sources:

1. Glass door reviews of tech companies
2. https://betterprogramming.pub/the-gender-gap-in-data-science-what-the-data-says-2a74892655f1
3. https://genderdata.worldbank.org/topics/technology/
4. https://honeypotio.github.io/women-in-tech/
5. https://genderdata.worldbank.org/

Methods of analysis:

- Pandas data frame (Dictionaries, tuples, lists)
- Text analysis (Text tokenization)
- Distribution (Box plots, Normalization, etc)
- Linear regression
- Prediction for upcoming years
- Descriptive statistics
- Categorical explanatory variables

Scope:

- Multiple sources
- Multiple methods
- Multiple data questions
- Multiple deliverable formats (data frames, graphics, statistical analysis, etc)
- To be able to analyze datasets to determine if the women workforce in technology is actually growing globally.
- Go beyond simple data exploration and generic python scripting, and be able to analyze data and understand how women have been acquiring dominance in technology