New England Blacks in Philanthropy

Financial Support Given to Black Non-Profits

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Client Background

New England Blacks in Philanthropy is an organization that unites Black philanthropists, trustees, and staff of grant making institutions to enhance philanthropy's ability to address the needs of Black communities nationally and globally.

Project Description

This project involves collecting financial information going to predominantly Black non-profits in the Boston area. Predominantly Black non-profits are described as either having a majority Black board of directors, a Black CEO/majority Black leadership, and/or serving a majority Black community. To determine if leadership or the board of directors are Black we will collect 990 forms in MA and cross-search the board of directors and leadership in the LinkedIn, RocketReach, and Guidestar APIs and determine their race. Then we want to specifically look at what percentage of this charity money goes towards Black non-profits amongst all nonprofits in Boston.

We propose testing several techniques to determine the race of the leaders and board members of the nonprofits. One option is computer vision/facial recognition APIs; however, we know these are inherently biased. A second approach is to search for specific keywords from the LinkedIn profiles. These keywords will be provided by NEBIP.

Question(s)

- What percentage of giving goes to black led organizations vs. all donations?
- What are the average revenues of Black-led organizations compared to average revenues of all organizations?
- What are the unrestricted net assets of Black-led organizations compared to average unrestricted net assets of all organizations?
- How does gender impact numbers above?
- What is the total volume of Black philanthropic dollars?

- What is the total number of Blacks in the nonprofit sector?

Data Sources
- 990 Forms:
  - Financial documents for non-profits
  - http://www.charities.ago.state.ma.us/charities/ or IRS: https://apps.irs.gov/app/eos/
- Guidestar API:
  - Lists directors and board members as well as grant-givers and grantees
  - https://learn.guidestar.org/products/data-sets-for-research
  - BU Library - https://www-guidestar-org.ezproxy.bu.edu/search
- Pay at America's Top Nonprofits:
  - https://www.philanthropy.com/interactives/salaries?cid=cpw_featuredata#id=filters_state:MA-Massachusetts
- IRS List of Tax Exempt Organizations:
  - https://www.irs.gov/charities-non-profits/exempt-organizations-business-master-file-extract-eo-bmf
- LinkedIn API:
  - https://docs.microsoft.com/en-us/linkedin/shared/integrations/people/profile-api
- Bureau of Labor Statistics
  - https://www.bls.gov/opub/ted/2014/ted_20141021.htm
- RocketReach API
  - Downloads images of directors and board members from LinkedIn
  - https://rocketreach.co/api?section=api_section_ws_search
- RefUSA
  - Get the ethnicity and race (mostly contains informations for companies, but may include information for non-profits)
  - http://www.referenceusa.com.ezproxy.bu.edu/Home/Home

Data Analysis Methods

- For scraping we could use:
    - Scrapy, Selenium webdriver, and/or Beautiful soup to download the 990 forms
    - The APIs should allow for easy information retrieval otherwise.
- For identifying the race of executives we could use facial recognition tools such as the Clarifi API on their LinkedIn profile pictures.
- For cleaning and preprocessing we could use Pandas to organize the dataset into dataframes for faster computation.
- We could use data visualization libraries such as Matplotlib, Seaborn, and Bokeh (interactive web-integratable visualizations) to display the financial information between black and other nonprofits.

Approximate Timeline*

Given the timeframe provided for this project, we expect that we will be able to extract the names of board members and executives from the IRS 990 forms of the different non-profits. We will first try to do this, but if board members and executives names are not fields that are given, then we will use web scraping to obtain that data. After obtaining the names of board members and executives, we will attempt to use Guidestar to list their demographics, and if this is not possible we will attempt to get images of directors and executives using the LinkedIn API or the RocketReach API using keywords provided by NEBIP. The RocketReach API will allow us to download images which we can then use the RefUSA API for to determine ethnicity and race.

*After the initial discussion with our client, Spark Director, and Spark PM, we've established that given how much time is left in the semester, we may only be able to get through obtaining the board members and executives names from Guidestar and at least downloading images of those individuals using the LinkedIn API or RocketReach API. Everything listed in the timeline after those steps will be completed if time permits.