

## Capstone Project

# Classification of nonprofit Organizations by scores in the city of Philadelphia

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## 1. Introduction

### 1.1 Business Problem, Scope and Background

The majority of nonprofit organizations rely upon donors as an important source of their funding structure, according to some surveys and average of 34 percent of these organization's revenues come from individual's contributions. In recent years several scandals involving nonprofit mishandling of funds and other misconducts, have impacted the philanthropy domain and individual's faith on their contributions are being used.

The goal and interest of this study is to explore and provide individuals and potential donors with the necessary information to make educated decisions for their donations for major nonprofits organizations located in the city of Philadelphia. Th information is based on different types of scores processed by an evaluator organization in this field.

The scope of this analysis will focus on nonprofit organizations with IRS status 501(c)(3) that generate at least 1\$ millions of dollars in revenue for two consecutive year.

Considering this problem, I will group the organizations, subject to this study, and provide relevant information and graphs of the those that meet best practices both in the financial and accountability areas, thus donors can have more information at the time of planning their contributions.

### 1.2 Data Source

For my analysis I will obtain the data from an organization called Charity Data Navigator, another nonprofit organization that collects financial and other information for nonprofits organizations. This organization provides APIs, similar as Four Square, to get reference data of nonprofit and charities organization including rating list and other related content.

After executing the API "Get Organizations", I identified approximately 8,713 nonprofits in the city of Philadelphia and only 85 (revenues of at least 1\$ Million for two consecutive year).

I will center the study on these 85 organizations using the following features:

- **Score**: is the overall score (out of a possible 100) based on Financial Health and Accountability and Transparency, in such a way that nonprofit must excel in both areas in order to score well overall. The company calculation of the total score is:

$$100 - \sqrt{\frac{(100 - \text{Financial})^2 + (100 - \text{A\&T})^2}{2}}$$

- I will also use the individual Financial and Accountability scores to slice some relevant information in these two dimensions.
- I will obtain location coordinates of each organizations using GeoPy to show the distribution of them in the city of Philadelphia.

### **Important Note:**

After posting a note in the class Forum, ons staff member approved my request to use a different API and theme. I found Four Square API limited and I was interested in this project due to volunteer activities with nonprofit organizations in the area. The neighborhood dimension is relevant for the subject of my study.