Using data to guide strategy: enhancing donor engagement at Yale University

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Using Data to Guide Strategy: enhancing donor engagement at Yale University

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Abstract

With an increasing number of avenues for philanthropy available to charitable inclined citizens, university offices of development are thinking of new means to identify and engage donors for consistent giving. In order to establish proof of principle for a new approach, we have analyzed large amounts of giving data captured by the various entities at Yale. We will present the development of predictive models for two types of giving to Yale. One model estimates the likelihood of donating to Yale through selected types of charitable contributions, including charitable gift annuities; a second model examines alumni participation in 50th reunion neutron campaign data. Data identification, preparation, isolation and analysis for these models are primarily conducted through a data blending platform and Analytics predictive model platform. Permitted combining Yale and non-Yale data (such as from the Securities and Exchange Commission, Forbes magazine, IRS via a vendor, etc.) for analysis. We created an instance of all relevant data outside DARCY and created numerous derivative values, such as binary flags that indicated participation in selected student activities (gavel-type sport) or a secret society, and transformed that data into a consistent and continuous independent variables set. Rapid Insight software and Interactive Predictive Analysis and Analytics predictive model platform permitted combining Yaale and non-Yale data for giving during the reunion year up to >$1 million. The characteristics of such modeling efforts can be undertaken to identify the “next best” cohort of Planned Giving prospects, and separately also identify the most likely 50th reunion donors.

Background

Yale University is a successful fundraising environment. We raised $3.88 billion in the 5-year capital campaign that ended in 2011, and we have broken our own annual fundraising records since that time. Reunion year giving in the 45th reunion year was ~ $659 K. Native data points include year(s) of graduation, degrees, home and business address, fundraising statistics, and communications. Rapid Insight software and Interactive Predictive Analysis and Analytics predictive model platform permitted combining Yale and non-Yale data for giving during the reunion year went up to >$1 million and allowed for the inspection and interrogation of large amounts of information. Perhaps the most critical step in the fundraising process is outlining a plan for identifying the best donors has been largely ad hoc, but is feasible with statistical analyses to the entire donor pool, it allows for the inspection and interrogation of large amounts of information. Perhaps the most critical step in the fundraising process is outlining a plan for identifying the best donors, and can be undertaken to evaluate fundraising in other sections in the Yale Office of Development.

Conclusions

In the present effort described in this poster, we have attempted to enhance the donor identification protocols by applying a stepwise regression analyses to the donor pool, and identified the “next best” cohort of Planned Giving prospects, and separately also identified the most likely 50th reunion donors. When these results were discussed with fundraisers who had previously relied on an informal mode of solicitation in both the Planned Giving and 50th Reunion departments, it was evident that the characteristics of an ideal donor outlined by each model while initially surprising, were congruent with what might have eventually surfaced, albeit perhaps several fundraising cycles later.

The authors wish to thank development officers in the Planned Giving and Annual Fund sections, and the ITS Department of the Office of Development. Rapid Insight personnel advise us on the use of their software.

Courses and Workshops

Courses and workshops provided by Rapid Insight personnel advise us on the use of their software.

Yale College Class of 1965 Alumni in their 50th Reunion Year

Prior to analysis and modeling, AF giving averaged $114 K/year. AF giving in the 45th reunion year was ~ $659 K. AF giving in the 50th reunion year went up to >$1 million. A statistically relevant set of characteristics with top performing donors based on 7-10 years of historical fundraising data but are not easily identified by anecdotal means, such as has been traditionally done via Excel workbook sorting. Our chief goal is to develop scoring models in partnership with the fundraising experts in these two areas, and to deliver reliable results that encourage a more robust and regularized approach to selected annual fundraising strategies.

Funding data collected in DARCY, Yale’s database of more than 500,000 people including more than 160,000 living Yale alumni:

- Native data points include year(s) of graduation, degrees, home and business address, fundraising statistics, and communications
- Rapid Insight software and Analytics predictive model platform
- Permitted combining Yale and non-Yale data (such as from the Securities and Exchange Commission, Forbes magazine, IRS via a vendor, etc.) for analysis

We created an instance of all relevant data outside DARCY and created numerous derivative values, such as binary flags that indicated participation in selected student activities (gavel-type sport) or a secret society, and transformed that data into a consistent and continuous independent variables set. We tested ~ 40 variables taken on from our database for (comparing same) group shares a statistically relevant set of characteristics with top performing donors based on 7-10 years of historical fundraising data but are not easily identified by anecdotal means, such as has been traditionally done via Excel workbook sorting. Our chief goal is to develop scoring models in partnership with the fundraising experts in these two areas, and to deliver reliable results that encourage a more robust and regularized approach to selected annual fundraising strategies.

Materials and Methods

Charitable Gift Annuity and Bequest Intentions

- Annual fundraising strategies.
- Encourage a more robust and regularized approach to selected fundraising experts in these two areas, and to deliver reliable results
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Yale Development’s predictive analysis efforts differ significantly from big data analyses undertaken in typical research projects in pharma and other sectors, yet share the common goal of informing future strategies. Our analyses will help in understanding current trends in higher education fundraising; the scope of information collected and maintained by Yale’s Office of Development; how that data is used and protected; and some of the characteristics unique to Yale’s best fundraising prospects.