Monograph

USING PREDICTIVE MODELING TO GUIDE RESOURCE ALLOCATION IN ANNUAL GIVING AND ALUMNI RELATIONS
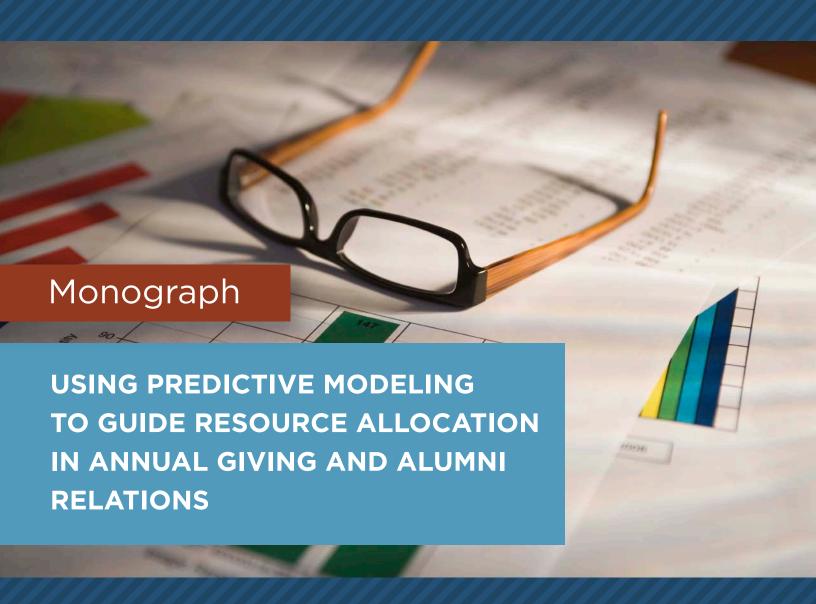
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Business Analytics
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Foreword

Most alumni relations and annual giving operations have limited intelligence about who will be a strong reunion volunteer, annual giver, or alumni travel prospect—if the person has not previously participated in any of those activities. But rather than pulling a random database query and then reaching out at random to the contents of the entire resulting list, applying predictive analytics can help provide a more targeted allocation of your resources and more targeted messaging.

An In-Depth Look at Predictive Modeling

In one example of such predictive analytics, the University of Pennsylvania has found a series of model variables that identify strong prospects. We reached out to Bob Baer and Kylie Mitchell, who worked extensively on this project. In this monograph, Baer and Mitchell address the methodology they used (to help you build on their findings) and then walk you through the independent variables that Penn found to be statistically significant and helpful in guiding decisions in annual giving and alumni relations. With these variables in hand, you'll be able to more effectively **scour your own database to find the best prospects** for various alumni relations and annual giving functions.

In this report, you'll read about using predictive modeling to target:

→ Alumni for reunion-year annual giving
→ Alumni for giving in a non-reunion year—especially looking for prospects among lapsed and never givers
→ Institutional "friends" for annual giving
→ Prospective alumni reunion volunteers
→ Alumni who are most interested in alumni tours.

A Low-Cost Approach

Software. While more sophisticated modeling software has been used for the applications in this report, most of the predictive models that Baer and Mitchell discuss have also been run using the data analysis tools provided in Microsoft Excel.

Staff. The projects described here are the collaborative work of only two analytics professionals—both of whom had other analytics project responsibilities.

And you can get started even with fewer resources.

Your institution may have students and faculty with the background and expertise to use the techniques described here. A partnership between fundraising professionals and academics could be an ideal low-cost approach to get started in predictive modeling.

To Use this Monograph Effectively

This monograph provides a detailed primer on predictive analytics, and the examples given are very technical.

→ If you already have an **advanced knowledge** of predictive analytics, read this report for insights on variable definition and selection, model structure, data conditioning, and assessment of model "validity" and performance.

→ If you have **little or no prior background** in predictive modeling, read this report to gain an understanding of how one uses predictive modeling, the data requirements, the results you can obtain, and the potential impact for your organization.

About the Projects in this Monograph

The projects described in this monograph were completed between 2010 and 2012 in Development and Alumni Relations at the University of Pennsylvania. Bob Baer was responsible for the earliest of these projects, the Penn Fund Reunion Donor Participation model. All of the other projects were the product of collaboration of Kylie and Bob. On the Reunion Planning Committee Volunteer model, Reunion Gift Committee Volunteer model, and the Penn Vet Annual Giving model projects, Kylie was the principal investigator. On the Non-Reunion Donor Participation model, the Wharton MBA Reunion Donor Participation model, and the Targeting for Alumni Travel model, Bob was the principal investigator.