Metropolitan Ministries Leverages Machine Learning to Predict Recovery of $1M in Donations

Metropolitan Ministries is a nonprofit organization which serves poor and homeless families across the Tampa Bay area. They pride themselves as being a grass-roots organization, powered by donor and volunteer-fueled contributions as a result of strong marketing initiatives and community outreach. As a non-profit organization, they provide practical help and services to local families such as Early Education and Self-Sufficiency programs, emergency shelter, and meals for those in need. While their program offerings have advanced over the last five years, their degree of contributions and donations has decreased, with little insight into the cause. In fact, their top donor segment, which makes up 90% of all the donors for the organization, has declined by 9%. With a desire to resolve this decrease in donations, and to reevaluate their marketing strategies to ensure proper targeting, they partnered with CCG for a transformative advanced analytics project.
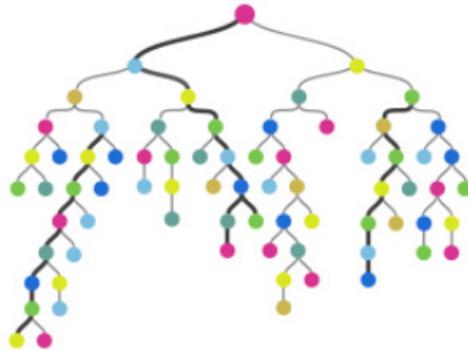
CHALLENGE

Over the last five years, Metropolitan Ministries has lost $1 million worth of donor representation – which translates to 2,551,021 meals served, 149,960 nights of shelter, or 700 children in the Early Childhood Education Program. This devastating decline led Metropolitan Ministries to evaluate their donor lifecycle and the marketing factors that go into donor acquisition and retention.

Call campaigns, grant requests, and direct mail initiatives were evaluated to see which type of marketing effort would lend the best results. Metropolitan Ministries knew they needed to customize their messaging to get the attention of high priority donors for personal asks, and donors who could give more than they previously had in the past.

CCG partnered with Metropolitan Ministries to evaluate these three questions:

1. What is a donor's lifetime value?

2. Are donors likely to repeat donations or are they likely to churn?

3. Would personalized marketing efforts or mass marketing efforts get a higher ROI?

QUICK FACTS

> Metropolitan Ministries partnered with CCG to uncover their donor lifecycle and reconfigure their marketing efforts to reach a greater ROI through the use of machine learning techniques.

> Industry - Social Assistance Non-profit

> Solution - Machine Learning

> Technology - Microsoft Azure Machine Learning

SOLUTION

Machine learning uses artificial intelligence to make and apply analytic predictions by recognizing and computing patterns in data. It's this process that CCG used with Metropolitan Ministries' donor data to predict the lifetime value, churn likelihood, and marketing output for the organization to succeed.

The first step to the project was analyzing the combined giving history, marketing history, and known demographics to create a simple calculation and summarize each donor's behavior into a KPI. That aggregated score was then assembled into a decision tree, a classification model in machine learning which illustrates levels of possible outcomes given a deciding factor. CCG used Microsoft Azure Machine Learning to create the decision trees, which labeled donor types and segmented the donor attributes based on the percentage of likelihood to donate.

SOLUTION. CONT

After assessing the accuracy of the system of decision trees, a frequency diagram showed the projected retention of current givers. It was this diagram which showed two key areas of attention: a group of donors who are likely to give again even with fewer appeals, and those who have a better chance of retaining with increased marketing efforts.

From the analysis in Azure Machine Learning, Metropolitan Ministries was able to compensate for lost donors by reallocating direct mail dollars to a digital strategy and invest in other revenue streams like Social Enterprises. To continue to grow the revenue stream, they sought to hire more staff to build relationships with more donors and bring in volunteers for donor giveback campaigns. With the help of machine learning, Metropolitan Ministries discovered each donor band's lifetime value, understood donor's likelihood to churn, and established personal marketing initiatives to achieve a greater ROI.