Being a Force for Good with Advanced Analytics

Data analysis can lead to amazing insights and solutions to complex problems.

By Sri V. Raghavan

At the recent Data on Purpose conference at Stanford University, some of the best minds discussed using data to further the causes of corporate social responsibility, targeted allocation of resources for the common good, alleviating poverty, and more. People tend to think of data and analytics in business settings, but they can also be key drivers of successful outcomes in nonprofits.

The use of data driven evaluation in the nonprofit world owes a debt of thanks to the work done in the private sector. Think of credit scoring algorithms or predictive models that provide consumer purchase likelihoods or customer churn models that determine an individual's propensity to take her business elsewhere. The same principles that developed these algorithms have been repurposed to address some vexing questions that plague us as a society.

Projects like the Impact Genome Project have been created with the sole purpose of using program evaluation data to determine the efficacy of social programs. Some of the business vernacular, such as "single unit of impact," has been co-opted to deliver outcome metrics. The Impact Genome Project has collected more than 75,000 data points and has identified at least 125 types of social outcomes. The idea is that once we know the preference for a particular social outcome and how that outcome is measured, evaluating programs becomes straightforward. The result is greater efficiency in administering a social program.

> "The tools are available to use data to meet your most troubling challenges."

A great example of advanced analytics delivering outcome-based evaluation can be seen in Senegal, an African nation that is plagued by high unemployment rates. The country is trying to become economically prosperous, but is often unable to lubricate the credit system to serve the wellspring of entrepreneurship in Senegalese society. Traditional sources of data to determine creditworthiness of the poor are universally absent. Much of the economic activity is cash based, and reliance on modern-day credit instruments is often minimal to non-existent. Under these circumstances, applying standard credit evaluation methodologies is likely to be a non-starter.

Enter the French digital finance group Microcred, which works to contribute to the growth of local economies in

Steps to Get Started with Advanced Analytics

Understand the data landscape. Not all data are likely to be clean and structured. In fact, most of the time, data are hard to come by and require some logical assumptions that enable certain kinds of extrapolation.

Don't get too fancy with the analytics. Most questions can be answered by using true and tried techniques that are available on hand. What is required is some thought as to which ones to pick for the analytics.

Become an effective communicator of your work. If you've found something interesting and meaningful in your analytics work, couch it in a language that everyone understands. Remove jargon, use easy to consume visuals, and make one important point that shows how your results can make a material difference to your mission.

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developing nations by offering simple, accessible financial services. The organization provides lending to nearly a half-million micro-entrepreneurs in eight African countries that would otherwise be unable to access financial markets.

Microcred, in partnership with Datakind (a pro bono group offering data services to nonprofit organizations), undertook primary data collection through highly personalized loan applications that considered the unique economic conditions of the population. They developed credit risk models to assess the likelihood of loan repayment (or default). The data from about 110,000 loan applications made over a seven-year period were used to build rich predictive models to assess default likelihoods.

The idea behind these predictive models isn't just to pre-select the defaulters and provide loans that are likely to be safe but also to ensure that drivers of loan default are identified and the borrower pools are expanded. The result is a far greater availability of sensible credit options, higher levels of economic activity, and greater overall economic prosperity. And that means that the widespread poverty and desperation in the area is greatly alleviated.

The era of big data has been upon us for a while. Many for-profit organizations have created solutions, products, and platforms that are hyper-versatile in terms of ingesting, curating, processing, transforming, and analyzing data while providing intuitive ways of visualizing insights, often in near-real time. Technology companies have contributed handsomely towards delivering the expertise and solutions that make all our lives better. Many nonprofits have begun to take advantage of this rich environment. If your organization hasn't done so, now is the time.

Begin creating a culture of making decisions based on solid data analysis. Embed that culture in your day-to-day operations and your long-term strategies. The tools are available to use data to meet your most troubling challenges and bring your mission to life.

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What to Keep in Mind while Deploying Advanced Analytics

Don't expect instant results. The science of analytics is hard work. Be prepared to fail and fail fast as you try to answer important questions. There is no shame in making false attempts.

Take one step at a time. Don't look for "the" answer. Small insights are perfectly okay and usually are needed. You can build on them to answer the larger questions.

Analytics is an interesting and messy enterprise, particularly in the nonprofit world. Data are often incomplete, often in federated storage spaces that are hard to get to, and not always structured consistently. That is fine. Prepare to exert some patience to clean through the mess before you open it up for the kernels of insights. They are there. It just needs a bit of work.

Never assume that analytics is a solo enterprise. A community of ideas and enterprise is what makes it impactful.

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