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CAREER DEVELOPMENT : ARTICLES

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In Person: A Career Home Run

Keith Woolner
United States
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I grew up in a town in New Hampshire where all the little boys were Cub Scouts, played Little League, and were Boston Red Sox fans. One of my earliest baseball memories is the replay of the 1975 World Series when Carlton Fisk hit a dramatic home run in Game 6 for the Red Sox. Like many other kids, I also collected baseball cards, and the first hints of my future surfaced when I developed an interest in the statistics on the back of the cards.

My family later moved to Orlando, and at the time Florida didn't have a major league team, so my interest in baseball waned. That changed when I moved back to New England to go to the [Massachusetts Institute of Technology](#) in Cambridge. I arrived in the fall of 1986, and within weeks the Red Sox were in the World Series for the first time since I really started following the game. This rekindled my interest in baseball, which has continued unabated ever since.

I originally intended to major in computer science. However, the "hardware" side of things--circuits, electronics, and such--never clicked with me, and I gravitated toward the more theory-based classes, as well as applied math. I ended up earning two bachelor's degrees, one in mathematics with computer science and the other in management science.

[Working in product management] was intellectually stimulating but not emotionally engaging. What did engage me was baseball statistics.

I went to work for [Oracle](#) doing software development, tech support, and system administration. While there, I pursued part-time a master's degree in [decision sciences](#) from [Stanford University](#) in Palo Alto, California, and after earning the degree, I switched to product management and marketing. After working at Oracle, I worked for a series of start-ups in Silicon Valley during the dot-com era (some more successful than others). In 2003, I relocated from the Bay Area to Raleigh-Durham, North Carolina, to work as a product manager for the statistical software company [SAS](#).

I found that I enjoyed working in product management more than I enjoyed working in software development. I liked seeing how business problems could be solved with our technology and communicating the customer's needs to our development staff. But no matter how interesting the technology or how novel the application, it was hard to get truly passionate about helping another business improve their profitability or run more efficiently. The work was intellectually stimulating but not emotionally engaging.

What did engage me was baseball statistics. I spent a lot of my free time reading online forums devoted to baseball, and I discovered that baseball statistics had moved far beyond the stats on the backs of the baseball cards I grew up with. I started designing my own customized statistics in the mid-1990s and eventually posted them on Usenet newsgroups and my own Web page. That got the attention of a fledgling group of baseball enthusiasts who wrote an annual book called *Baseball Prospectus* (a.k.a. *BP*), which reviews the previous season, makes forecasts for the upcoming season, and presents original baseball research. They invited me to join the group in 1998.



Keith Woolner got a chance to turn his hobby in baseball statistics into a career when

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the Cleveland Indians created a position for him as their manager of baseball research and analysis.

I wrote regularly for *BP* in my spare time for about 10 years, both for the [flagship annual](#) and later for the [Baseball Prospectus Web site](#). I studied a variety of topics, such as the relationship between pitcher workload and injuries and the influence of catchers on handling a pitching staff, and economic issues such as revenue sharing, analyzing umpire tendencies, and measuring the probability of winning a game from any situation. One of the statistics I invented, Value Over Replacement Player (VORP), was featured as [one of the signature stats of the "new generation" of analysis on ESPN](#). I also co-wrote some other *BP* titles, such as [Baseball Between the Numbers](#).

My role with *BP* eventually developed beyond just writing into overseeing research and development, managing the statistical databases, leading programming teams, and analyzing baseball statistics. Yet even as my duties increased, baseball was still a hobby. I was able to earn a little extra spending money from my *BP* writing and work, but my "real job" in the software industry paid the bills. *BP* became well-known in the baseball industry, including in major league front offices, and some of the research I've done, such as analyzing the relationship between pitcher workload and injuries, has influenced how teams are run.

This all culminated in early 2007 when the Cleveland Indians hired me as their manager of baseball research and analysis, a position created for me in the baseball-operations group. The Indians can't spend as much money on star players as do richer teams such as the New York Yankees and the Boston Red Sox, so we look for any competitive edge we can. My role is to find subtle trends hidden in the statistical data that can be used to help decision-makers make the best decisions possible. I analyze a huge database of baseball information to make recommendations on players, prospects, trades, free-agent signings, and game strategies.

Although I've been in my position less than a year, I'm pleased with what I've been able to contribute. I had some initial concerns that, because I never played baseball even at the high school level, let alone college or the pros, I might be viewed as an "outsider" and have difficulty being taken seriously. But I've found the Indians' front office to be open-minded and accommodating of new ideas, regardless of where they originate. Several areas of the organization have sought me out for my expertise, and I'm learning more and more about how a professional sports franchise operates.

For a guy with my interests and background, it's pretty much the definition of a dream job. I managed to turn my hobby into a career, and I get to go to work at the ballpark each day. Although I had been a lifelong Red Sox fan, I found it surprisingly easy to shed my former loyalties and fully embrace the Tribe as my new team. The great irony is that it was the Red Sox who knocked the Indians out of the playoffs and went on to win the World Series. But we'll get 'em next year!



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Science Careers welcomes reader submissions for the In Person series. Your essay should be about 800 words, personal in tone, and with direct relevance to education or career development (in the broadest sense) in the sciences and engineering.

Please attach your submission to an e-mail message to snweditor@aaas.org (Subject: In Person submission) as an editable text document; Microsoft Word format is preferred, but the OpenOffice format is acceptable.

Each manuscript we receive will be given careful consideration. We will contact you if we decide to publish your essay. Most essays will be edited prior to publication. Please do NOT include photographs or other attachments with the original submission. If we decide to publish your essay, we will contact you within 6 weeks. If you do not hear from us in 6 weeks, feel free to submit your work elsewhere.

Former software developer Keith Woolner now works for the Cleveland Indians as their manager of baseball research and analysis.	Comments, suggestions? Please send your feedback to our editor .
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