Career Advancement in Data Mining: A Primer

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If you are just beginning a career in direct marketing data mining, then congratulations. You have made one of the most professionally rewarding career choices possible. If you are a few years into your career, then you already understand.

Regardless, the following will help you understand how to expand your horizons:

Ample opportunity across multiple career paths. If the past few years are any indication of what lies ahead, you will have no shortage of jobs from which to choose. You will be in great demand because you are on the vanguard of the customer relationship management revolution. Employment prospects will be particularly attractive if you combine the statistical techniques you learned in school with the "data detective" skills that can only come from extensive, in-the-trenches experience.

Your career direction will be influenced by your nonquantitative skills and interests. Typically, data miners follow one of two very different career paths. Some remain on the technical side and eventually either move up the ranks to manage an entire staff of analysts or transition into the related field of data warehousing and processing. Others evolve into generalists and become senior-level marketers or strategy consultants.

Establish a solid foundation of statistical techniques and programming skills. Regardless, you first must establish grounding in the basics of data mining. Strive to develop deep expertise in core analytical techniques such as clustering and predictive modeling. You should also work to become an excellent programmer in one or more of the widely used analytical packages such as SAS or SPSS.

There are two kinds of data miners. One has just enough programming proficiency to execute the statistical steps, or procedures, required for analytical projects. The other is able to manipulate data in complex and sophisticated ways. Consider, for example, a predictive modeling project where the data miner wishes to create a derived field to act as a potential predictor variable and where the analysis file must be manipulated in a

complex way to achieve this end. A data miner with weak programming skills either will have to forgo this variable or depend on others for assistance. A data miner with strong skills, however, will meet this challenge with ease.

Often, analysts with weak programming skills work at companies with large statistical staffs, proprietary data mining systems and rigid processes. Some analysts equate data mining with pushing buttons in the prescribed sequence indicated by the company manual. They have little appreciation of the "eureka moments" that occur when laborious digging unearths a paradigm-shifting fact or market segment. You do not want to become one of these individuals.

The effect of company size on career development. At a small company, you will have a greater effect on the organization. However, opportunities for growth might be more limited. Also, there may be fewer chances to latch on to experienced mentors who will push you to achieve your potential.

Effective communication and an understanding of direct marketing. As an ambitious data miner, you must develop an appreciation of how the results of analytical projects are leveraged by marketers and fit into the company's overall strategy. The astute analyst soon will realize that it takes much more than just statistics and programming virtuosity to break into the elite of the industry. It will be critical to think of yourself as a quantitatively grounded direct marketer rather than as just a technician.

As you evolve into a well-rounded business professional, you must develop the ability to communicate clearly and concisely. This will allow you to work effectively with experienced professionals in marketing, sales and business development, many of whom will have MBAs and more years of experience than you have.

Do not be discouraged if you find it difficult to master the business and communications side of direct marketing. It is understandable because you will have spent several years focusing on numbers and code. Fortunately, many inexpensive vehicles are available for self-improvement. You might want to start with community college courses in business, grammar and writing.

Data warehousing and processing: A related technical field. If you think you would like eventually to branch out beyond data mining but want to remain on the technical side of the business, you will be in an ideal position to transition into the exploding field of data warehousing and processing. As a successful analyst, you will have honed your logic and data detective skills. Also, you will have become an accomplished programmer.

Your greatest asset, however, will be your years of experience as a sophisticated, technically grounded, direct marketing-oriented end-user of data warehouses and marts. Stories of data warehousing disasters circulate throughout this industry. You will be in an ideal position to avoid these pitfalls, and your employer and clients will recognize this.

An estimated 30,000 new jobs will be created in the direct marketing industry in the next five years. Many will be in data warehousing and processing. Do not be concerned if you need additional training to learn a new programming language, for example. There is

such a shortage of experienced personnel that many employers will contribute toward, or even pay all of, your tuition.

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