Exploring Careers in Computing

For this assignment, the computer related career I chose was Data Scientist. A Data Scientist is someone who collects and analyzes large pieces of data to aid their organization in business decisions. They organize data and communicate with both IT and business sectors. Data Scientists must be comfortable with working with various programming languages such as R and Python. They study statistics and trends and must have a strong understanding of analytical techniques such as machine learning, deep learning and text analytics.

For most Data Scientist positions, a postgraduate degree in either a statistical, mathematical or technical field is required. Schools are now starting to offer degrees in data science. Degrees in computer science are the most common among Data Scientists. Roughly 38% of current Data Scientists also boast a doctorate degree.

Essential skills for data science include proficiency in document use, digital technology and computing languages. In most markets you also need to be fluent in English. Data analysis, decision making and problem solving are also very important skills in this field. Common work habits to develop are: teamwork, reliability, organization and initiative.

In the future, data science jobs will be in high demand as it is the largest growing market in computer science. The unemployment rate for Data Scientists is among the lowest in the country so finding a job won’t be too hard. The average salary for a Data Scientist varies from around $70 000 at a starting position to $100 000 at a more senior position.

Learning about Computer Science

In my community there are not many programs directly linked to data science. There are a few which dive into computer science and many that take on business. Co-op programs are present for many business activities. Job shadowing is also prominent mostly for entrepreneurship and business.

Career fairs are a great place to meet people in this field and I am aware of a couple of friends and family who have attended career fairs in the past and have met up with a few computer scientists. Virtual networks and support groups are a great place to learn about computer science. There are many online communities and forums dedicated to inform people about computer science. Many places on the web are created with the sole purpose to inform people about this field. I have done my fair of browsing and have a number of communities like this. Internships are also a common way people in my community learn about computer science and data science. Interns are often taken by smaller companies and organizations and a lot can be learned from being one.

Postsecondary Education

For the specific career that I chose (Data Scientist), there are no college opportunities, in other words, all Data Scientist jobs require a university degree. For entry in the computer science program at the University of Toronto you need to have taken Calculus & Vectors (MCV4U) and English (ENG4U) in highschool. You must also have an Ontario Secondary School Diploma and have taken 6 4U/M courses. To complete this degree it will take you 4 years, plus an additional 2 years for a masters program. In the first year you will need to take your adequate computer science course, an english course, a math course and a physics course. The tuition to study this course at the University of Toronto is $6 780 and the additional cost of books and school supplies is $ 1 500.

My Opinion

After doing all of this research I think I would love being a Data Scientist. Considering the fact that my father is also a Data Scientist I think I could learn a lot from him and his colleagues. I find this field genuinely intriguing and since it is expanding so rapidly it will be relatively easy to find employment. Since I must go to university to study this field, I do not have the choice between college and university courses. The computer science course at the University of Toronto would be a great fit for me.

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