In a modern society that progressively relies on and retains valuable­­ and often confidential information, experience and knowledge of how to manage, maintain, and safeguard that flow of information is paramount. The people in charge of today's computing infrastructure are highly skilled and educated, with many employers mandating certification and an undergraduate level education at a minimum. Given these strict education requirements and to distinguish me from most applicants, I have enrolled in the Computer Science postgraduate diploma degree. Let us observe a few points of discussion concerning the importance of acquiring a postgraduate degree in computer science.

Specialized knowledge and skills previously learned in a school or from work experience are now broadly accessible and comparatively low-cost or free. With this information readily available, formal education must provide an advantage. Despite how one feels about the subject, a report published by the Harvard Business School entitled Dismissed by Degrees states “Employers find today’s high school graduates as well as those with some college or an associates’ degree, to be less job-ready than earlier generations of non-degreed applicants” (Fuller, J., Raman, M., et al. (October 2017)). A postgraduate degree in computer science lends credence to one’s expanded knowledge of the field, with many employers requiring both formal education and experience. According to the U.S. Department of Labor, an Information Security Analyst who oversees defending and hardening a company against cyber-attacks generally requires a bachelor’s diploma and, depending on the employer, up to 5 years of work experience for an entry-level position. A postgraduate degree is certainly favoured by employers and will accelerate a career path in the industry given the more extensive knowledge gained at a graduate level. In my experience, education has been a hindering factor to most employers, given either the nature of the position or strict rules imposed by, for example, union requirements.

Cybersecurity is the concern of everyone in the industry to implement proper processes when dealing with information. Every day it seems an article appears on our news feeds about a new high-profile ransomware incident or a recently discovered vulnerability in some system. In IBM’s yearly Cost of a Data Breach Report, they detail and break down the costs associated with corporate data breaches. In their 2021 report, IBM research indicates that the average cost of a data breach is USD 4.62 million, not including the ransom itself. These incidents are not simply the work of organized individuals; nation-state and state-sponsored hacking groups are becoming more dangerous every year. In 2010 the first-ever cyber warfare weapon was discovered. The weapon, later codenamed “Stuxnet” by Symantec researchers, was purpose-built to do damage to physical components in a nuclear lab. With cybersecurity positions being one of the highest paying and highly sought after in the industry, the demand for security analysts is outpacing the number of people seeking a relevant position. According to the Government of Canada, as detailed in their Job Bank Job Prospects for Systems Security Analysts, the demand for information security analysts will increase by an estimated 47% by 2028, a figure that they say is 20% higher than the average of all other occupations. I have been interested in cybersecurity for as long as I have been interested in computer science, and from personal experience speaking with professionals in the field, there will always be significant demand.

A crucial benefit of getting a postgraduate diploma in computer science is strengthening one’s foundation of knowledge. Computer science is a specialized field and more than ever employers are looking for certification and formal education not just as a mark of experience but as an indication of personal commitment and ambition. Having a broad range of knowledge allows someone to be a more efficient professional in the field. My expectations from this course are that it will greatly assist me in following a long-term career in systems administration and, eventually, information security. I require a stronger foundation in programming, and I hope to develop my writing and academic skills to improve my interpersonal skills with managers and executives.

In conclusion, with the outlook on computer science positions being favourable and, in some cases, considerably higher than most occupations, acquiring a postgraduate degree will provide a competitive edge to a career in the field. This demand is perpetual and will only continue to grow as we move towards a hyper-connected society both in the traditional sense and in ways we currently only dream of.

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