

# **The Enthusiasm behind Computer Science**

## **1. Introduction**

The answer to why students choose computer science as a major could be varying; however, the driving force of learning this field is that computer science is magical. Liengtiraphan (2017, as cited in Rapaport, 2017: 26) states that 'Computer science is very empowering. It's kind of like knowing Magic: you learn the right stuff and how to say it, and out comes an answer that solves a real problem. That's so cool.' "Magic" is, for example, to harness the power of nature by using spells. In contrast, programmers use the same procedure to represent something unnatural by creating a code instead of utilizing magic spells (Rapaport, 2017: 26). Whether in the environmental, financial, industrial, health, educational, communications or entertainment sectors - information technology influences society in all areas. Because of its effectiveness, nowadays, it is impossible to imagine the world without it. This essay begins with the importance of computer science in society, followed by the significance of computer science degrees and a conclusion.

## **2. The importance of computer science in society**

As Liengtiraphan said, the problem-solving ability of computer science is magical. As early as the 17th century, people imagined creating a computer that could solve mathematical problems independently. For example, Gottfried Wilhelm von Leibnitz developed a calculator that could add and multiply in 1671 (Gill, 2015: 174). Nowadays, computer science is complex; however, modern computer science combines

engineering and science. With the help of sophisticated automatic computers, computer scientists can solve complex mathematical calculations and understand algorithmic computing (Rapaport, 2017: 29). A good overview shows the following picture:

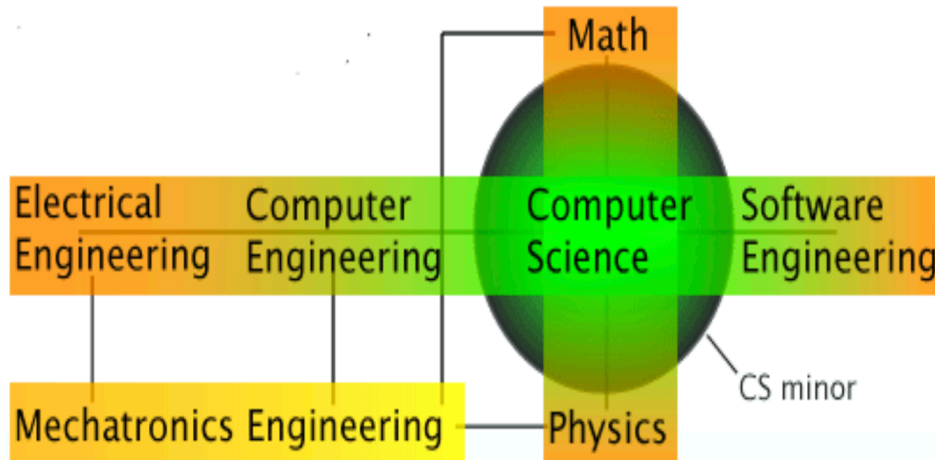


Figure 1: Scope of computer science and related subjects (Computer Science Canada 2007, as cited in Ray, 2015: 4)

Computer science plays an essential role in education. The possibility of using e-learning platforms and education applications is an asset to humanity. It is a new way of learning. Problems can be solved and shared more quickly over the internet, and researching is easier than ever before. Online courses, in particular, have a significant impact on education. Many students cannot afford to study outside their home country and choose to study online thanks to the e-platforms (Flavin, 2018). Reflecting on my experience, I opted to pursue a computer science course online for local and financial reasons, topped by the ability to take classes at any time.

In healthcare, they use computer-aided programs to manage the entire organization, including personnel planning, storing patient information, research and development,

procuring medicines and, above all, diagnosing various diseases. Computer-based devices or information technology devices have also partially restored the communication ability and vision of the impaired person. Thanks to information technology, the healthcare system has made advancements that seemed impossible (UKEssays, 2018). Based on the available data and facts, I can confirm the medical development. Computerized devices have helped medical professionals treat humans and animals, starting even before birth.

Another significant enrichment is the use of computer science in the environment. For example, wildlife conservationists use information technologies to protect areas where wildlife might migrate by warning people with caution signals. Furthermore, climatologists harness computers to provide evidence for global warming by showing earth changes and, above all, to predict the population against natural catastrophes (Computer Science Degree Hub, 2022). As for my experience, I have to give credit to computer-aided projects led by climatologists and meteorologists for alerting local communities to impending danger. Getting ahead of natural incidents by even a few hours makes a difference.

Computers help provide the best service to customers, protect accounts and transactions, and make efficient cashless payments in the financial sector. Similarly, production has become more efficient with the help of computer-controlled robots in the industrial sector (UKEssays, 2018). In the business world nowadays, electronic commerce is vital to the survival of many companies (Gill, 2015: 175). Moreover, today's entertainment would not play a massive role in humanity's life without computer graphics (Gill, 2015: 176). Furthermore, a virtual playground of computer science is

communication. It only takes one click to get in touch with the world (Flavin, 2018). Based on my observation, I agree with this statement; meanwhile, I have friends from over 15 countries, and we are as close to each other as never before through social media.

### **3. The significance of computer science degrees**

It is not surprising that enrollment in computer science programs is rising. The demand for computer scientists is remarkably high worldwide, and since there is a need for them in all areas of society, demand will increase even further. In addition, the wide range of computer science subjects attracts more students. Data from the Bureau of Labor Statistics show that between 1997 and 2015, demand for workers in computer science occupations increased 20-fold, and the organization expects that it will grow faster than overall job growth in subsequent years (National Academies of Sciences, Engineering, and Medicine, 2018).

Also, the type of degree is decisive for the career. A computer science certification provides the first approach in the computer world. With an associate degree, graduates can apply for entry-level tech jobs. On the other hand, a bachelor's degree qualifies graduates for many careers. Therefore, the importance of a master's degree in computer science may not be apparent to many. (Stuat, 2020).

First of all, the qualification from a postgraduate in computer science is typically more elevated than a graduate. They are usually experts in computer engineering, machine learning or information technology. Also, with work experiences or sufficient qualifications in this area, graduates from other fields can pursue a master's degree.

Another significant aspect is that master's students can select a specific focus, which helps them stand out against the competition. As a result, postgraduates are in high demand at major technology companies, expect higher salaries, and advance to leadership positions (Collegerank, 2022). Regarding the second chapter, the importance of computer science in society, the leadership is responsible for creating a better world.

I opted for a postgraduate certificate in computer science because the course is best suited for lateral entry and understanding computer theory. In addition, this course offers me the knowledge that I require for the master's program. Therefore, I am convinced that I would be more than just prepared for a master's degree in the future.

#### **4. Conclusion**

A world without any computers or information technologies would be limited. Since almost everything in people's lives works through computers and their related technology, understanding its usage is necessary. Ignorance leads to a significant limitation in daily life. The majority of the population does not see how dependent they are on information technology. Today's generation does not know what life is like without these technologies, which can be dangerous for society. Nonetheless, computer science still has enormous potential, as evidenced by the demand for computer scientists and increased enrollments in the field.

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