Major Research

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My Major: Computer Science

From a young age, I was always fascinated with science and math. Growing up in a world where technology was advancing so rapidly, it seems natural that I eventually would get hooked on programming. Ever since that first simple program I made on my calculator in middle school, my interest and experience has only grown through robotics clubs, coding classes, and now, my major in Computer Science (CS) here at UT Dallas.

According to the Bureau of Labor Statistics, Computer Science is expected to grow at least 13% in the next ten years, giving this field the title of fastest growing occupation (U.S. Department of Labor, Bureau of Labor Statistics, 2018). I’m very excited to be a part of this growth, especially since the field is very diverse and holds a lot of career paths. A degree in CS can diverge into Research, Network Architecture, Computer Programming, Support Specialization, Systems Analysis, Database Administration, Information Security Analysis, System Administration, Software Development, or Web Development. Computer Science is very versatile in that it works in tandem with many other fields. For example, Robotics Engineering is at the junction of CS and engineering (CareerOneStop, 2018). Each of these careers has a different median salary, but as a whole CS is a high-paying career choice with an average pay of around $100,000 (Indeed, 2018) in a mid-tier job. A recent CS graduate at UT Dallas would earn $58,967 (UT Dallas Career Center, 2014), which is 18% higher than the national average after completing a Bachelor’s degree (U.S. Department of Education, National Center for Education Statistics, 2017). I didn’t decide to pursue Computer Science for the pay, however, but rather because I fit a lot of the characteristics of a problem solver.

ONet OnLine reports that Computer Scientists hold traits such as critical thinking, written and oral comprehension, complex problem solving, and active listening. Required technical skills vary by job, but often include mathematics, engineering, programming languages such as C++, Java, Python, or tools like Hadoop and MongoDB (ONetOnLine, 2018). Many careers require a degree or advanced degree to get a good position, but CS is unique because it’s so fast-growing. Although a BS in Computer Science is helpful and sometimes preferred, it’s not rare to hear of industry professionals finding a high-level career from purely working on projects and gaining experience on their own. Since computers are so plentiful in this day and age, getting started with programming is fairly easy. I’ve spoken to a few alums from UT Dallas that currently work in Game Development, Software Engineering, and Robotics Engineering. Some of these are more research-based, but others have a traditional job hierarchy of programmers underneath managers broken up into different teams to attack a problem. Large software corporations also often have a Quality Control Department. In order to “get their foot in the door” for CS, many seek internships. Companies like Facebook, Google, Amazon, and Microsoft have some of the most sought-after programs, bringing some high-level competition to the field. Getting internships at start-ups or smaller local companies can also be very beneficial. From there, it’s all about gaining experience and moving up the ranks to more abstract, design-based, or managerial positions. In order to help myself get one of these competitive internships, I’ve looked into getting more experience through some student organizations on campus such as the Formula SAE Racing team, the Robotics Club and Robosub competition, as well as a lab position working on PolyCraft World here at UTD.

I’ve pondered my career plans many times, encouraging myself to form safety nets. If my life plans pivoted, I would switch my major to Electrical Engineering. I’ve always loved tinkering with electronics and I think that the same critical thinking skills as CS are required for this field. Electrical Engineers are involved in many different fields from Aerospace Engineering to Computer Hardware to Electrical Technicians. My dad is an Electrical Engineer, and he currently works on LEDs and silicon wafers. The field is expected to grow about 7% in the next 10 years, which is in line with the average growth rate. The median pay is just under CS at $95,060 (U.S. Department of Labor, Bureau of Labor Statistics, 2018).

All in all, I think I have a solid understanding of the specifics behind my future career. Understanding the career hierarchy and skills needed to succeed in CS is critical at this stage so I can begin to prepare now. Internship applications often begin in the fall for CS, so I need to plan ahead and be proactive. I am so excited to be a part of such a rapidly growing field!

References

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