Programmer vs. Computer Scientist:

A Small Distinction with a Big Impact

Baptiste Saliba

Binghamton University

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A common misconception in computer science is that the title programmer and computer scientist mean the same thing, when in fact there is a significant difference in what each title implies. The truth is anyone can program. All it takes is a little time and the ability to type on a keyboard. However, in order to be a computer scientist, you require more than just the ability to program, there are a couple of key attributes you have to have: critical thinking skills, problem solving abilities, inter personal skills, and most importantly a genuine passion for the field of computer science. Fidel Briones, a student at Binghamton University, is currently looking for an employment opportunity, and he truly possesses all the characteristics of a computer scientist. Fidel’s impressive portfolio of programs, as well as his past employment experience, have allowed him to develop these skills and interests, making him a unique and highly qualified candidate for any sort of computer science position.

Fidel’s past projects have taught him many valuable technical skills, as well as soft skills, such as teamwork and time management. Fidel’s first project was a sort of tower defense game, which he developed using NetLogo. This project taught Fidel to integrate a GUI into his programs and to write a strong back end program, which could take into account the various moving pieces in this tower defense game and have them interact properly. As a second project, Fidel decided to improve upon his prototype tower defense game by rewriting it in Java, rather than NetLogo, which he previously used. This allowed him to learn how to translate from one programming language to another, while keeping in mind the different perks of each language. Additionally, this allowed Fidel to better his understanding of Java utilities, while adding to his knowledge of GUIs, that he developed while making the prototype of this game. Most impressive of all is his final project, a fully functioning application similar to Reddit, but for studying. What began as a personal project, grew to a team effort by 5 group members and was later submitted into one of Binghamton’s Hackathons. Fidel started with a basic idea of creating easily accessible study materials on one page, that you could create and add to. However, he then decided to tweak the program to allow users to access other user’s study materials, aswell as the ability to create subpages for each unit of each class. This program required a vast amount of research on the capabilities of Python, but also required a lot of coordination and cooperation from all teammates. Fidel explains that one of the most difficult moments in this project actually had nothing to do with programming at all. He found the most difficult moment was when he and a teammate had an argument about how to tackle a major issue. This was resolved when, after careful deliberation, they both decided to combine their methods in a way that utilized the best parts of each idea.

Past work experience, for any sort of employment, is extremely important. With this in mind, this makes Fidel a highly qualified applicant, considering he has spent the last 3 years accruing experience in various different fields. Starting with his work in Mt. Sinai’s CEYE Hospital ER, Fidel obtained a comprehensive view of what it’s like to work in a stressful and demanding work environment. This not only shows an ability to handle stress but also shows an ability to quickly adapt to ever-changing work conditions. However, a hospital is quite different from the corporate environment that most computer scientists work in, which is why Fidel’s second job was designed to teach him what it means to work a more standard work day. One of the most important aspects of this second employment opportunity is that Fidel was able to work under an attorney. Despite the fact that there are no technical skills that Fidel could learn from an attorney, there are certainly many soft skills that he learned such as etiquette, professionalism, and most importantly critical thinking. These are essential skills to know considering Fidel’s primary field of interest appears to be the cyber security sector. He finds that this ever-changing sector presents one of the most pressing issues that our society faces today. Being able to act professionally and think critically in such a volatile field is vital. As for technical skills, Fidel’s work as an instructor at iD Tech Camps this past summer allowed him to not only help younger children learn computer science, but it also helped reinforce his own skills and practice explaining abstract concepts, something most computer scientists struggle with.

It's difficult to find someone who has the technical skills to write a program, and who can also work on a team or think creatively. Not only does Fidel possess the necessary technical skills for any computer science positions but he also has learned various skills, such as interpersonal skills and critical thinking, that really elevate him from being a simple programmer to now be a strong and capable computer scientist.