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Career Of Choice Research Essay

Introduction

I initially became interested in software-engineering as a career option two or three years ago. This was after I got my own personal computer. I am interested in this career because for most of my childhood and life in general, I have used and enjoyed computers frequently. This computer use has not given me much of a leg-up when it comes to software engineering knowledge, but rather it has made me very interested in software-engineering and the computer processes associated with it. I recommend this career to people who are interested in computers and have an aptitude for engineering due to the high salary and flexible work options.

Career Duties

Software engineers generally have varying career duties and responsibilities depending on whatever type of project they are working on. Software engineers focus on applying the principles of engineering to software development ([Software Engineer Job Description](#)). This is a very open-ended description for a very open-ended career. Software engineers are expected to use varying technologies / methods in order to create digital programs. Some more specific

duties of software engineers include “evaluating and testing new software programs, optimizing software for speed and scalability, writing and testing code, consulting with clients, engineers, security specials, and other stakeholders, and presenting new features to stakeholders and internal customers” (What Does A Software Engineer Do?). Software engineers are expected to be knowledgeable enough to solve problems and create varying programs using proper technology. The specific technology used by a software engineer can vary from person to person, but there are some general coding languages that are important to know within the software engineering field. These include Python, Java, JavaScript, HTML, CSS, etc. Software engineers will be expected to use varying tools, these tools appeal to those who are interested in computers and the processes associated.

Work Environment

The work environment of a software engineer varies heavily but typically it is collaborative and in an office-setting. Software engineers typically work in an office-setting but can also be granted a certain level of comfort / flexibility with their work that other careers are not granted. This is because of the nature of the work. Software engineers can often download all of the necessary coding applications from the comforts of their home on a personal computer or laptop. As a software engineer, it is exceptionally easy to work from home. This can be freelance work or full-time. This can allow for a generally more flexible work environment compared to other jobs. Despite this heightened flexibility, most software engineer jobs are structured just like other office jobs. Software engineers typically work 40-45 hours per week (How many hours do software engineers work?). The work done is typically sedentary and technical. Software

engineers are also often expected to work in groups, collaborating with other engineers (Software Engineering Job Description). This type of work environment is heavily focused on the work, and less so customers, socialization, service, etc. This type of work environment can appeal to people who are achievement-oriented and do not prioritize the social aspects of a job.

Important Qualities

Software engineers should have varying important qualities. One quality they should have is a heightened sense of attention to detail (Software Engineer Job Description). Software in its simplest form is just a set of instructions created by humans that is then compiled and turned into a direct course of action for a computer. In order to create high quality code, software engineers need to be very specific about what the computer needs to do. Software engineers have to make sure that whatever software is written correctly instructs the computer on what actions need to be completed. Small steps cannot be left out of the code hence why attention to detail is important. It is also important in the sense of actually creating a finished product. Small little details can be the difference between a professional looking website versus an amateur looking website.

Another important quality for software engineering is flexibility. Flexibility is important because software engineers are expected to use varying technologies, which can range from being new and upcoming to old and obscure (Software Engineer Job Description: What You Need to Know). Software engineers, just like engineers in general, typically have certain strengths and weaknesses. Some software engineers may be more apt towards working with Python, and others

with JavaScript. But they will often be expected to work in coding languages they aren't as familiar with in order to finish a project.

As with most other careers, experience is an important quality. Software engineers need to have experience with coding / building applications but also computers and technology in general. This experience allows software engineers to become accustomed to the process of solving problems. Those interested in computers / software should find that many of these qualities will come natural over the years through experience.

Education/Experience Requirements

Software engineers most often need a college degree and years of experience with certain technologies to fulfill the educational and experience requirements necessary to get a job. Software engineer jobs typically require a Bachelor's degree (**Morganellie**). Many software engineers also seek out certificates from coding bootcamps, which are often more specific on what is being taught compared to college degrees. Some of these boot camps include Thinkful, Fullstack Academy, Coding Dojo, etc. (**Galarita**). These boot camps also often team up with employers as “hiring partners”. The employers view the bootcamps as viable education. These boot camps allow for relatively cheap lessons regarding specific technologies, which make software engineering very accessible to anybody interested

Salaries

Software engineers are paid well, roughly double the national average (Software Engineer salary in the United States). Nationwide, the software engineer salary is \$108,907 (Software Engineer salary in the United States). However, the salary is even higher in California. The average software engineer salary in California is 22% higher than the nationwide average . This heightened salary can be attributed to Silicon Valley, which is known as the tech capital of the world. This higher salary is offset by the higher cost of living within Silicon Valley, so that should be considered when considering moving to Silicon Valley. Software engineer salaries are so high due to the high demand (Combs). This high demand calls for highly sought out skilled engineers, which makes the career of software engineering recommendable to anybody interested in the greater tech field.

Job Outlook

Software engineering jobs are in very high demand and employment has been increasing. Software engineering is in high demand for varying reasons. According to Binand, this is because “the world is moving online, the increasing complexity of current projects and the rapid advent of tech advancements”, etc. Software engineer jobs are not going to be going anywhere anytime soon. Software engineering is highly valuable to the world economy, entertainment, defense, etc. In the United States, there are 3.3 million people employed as software engineers, and 12.5 million jobs supported by software engineering (Combs). The growth of software engineering has outpaced the nationwide GDP growth (Combs). This makes software engineering a very reliable career path when it comes to job security.

Educational Institution Options

Software-engineers jobs generally require college degrees. Software engineering jobs often require Bachelor's degrees (Morganellie). Software engineers also have the option to enroll in coding bootcamps to sharpen their skills and strengthen their resumes (Galarita). Also, due to the nature of the work being tech-related, there are often many free online tutorials available that teach many industry-sought after technologies. This allows for a lower barrier to entry compared to other careers.

Conclusion

As shown in the essay, software engineering is a very sought after career. Although it is sought after, I do not believe it is a career path that is for everybody. I recommend software engineering to those who are actually interested in computers and the processes associated with. However easy software engineering may look, it is highly technical work. To get a career as a software engineer, it is necessary to be highly proficient with many technologies and while the job is in high demand the competition is also high. In order to become a software engineer, a lot of dedication is required. I could only confidently recommend this career to somebody who naturally finds themselves gravitating towards the field. As for me, Computers have always interested me and have been a large part of my life. Through my research, I have determined that software engineering is a great career for me. Becoming a software engineer will allow me to have a good quality of living, allow me to bring any ideas I have to fruition, and allow me to

work a job directly tied to my interests. I will pursue software engineering out of high school, and I will build whatever skills I can during high school. I am going to pursue software engineering because it pays well, interests me, and is the foundation of the modern technological world. I think if anybody has a greater curiosity regarding computers and the processes associated with them, they should also consider software engineering.

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