STEM Career Readiness Online Challenge

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Software Development And The Inner Workings.

~Why we choose this Career?~

We decided on the career path, Software Developer because of our interests in the STEM field and for the future of our occupations. So when we heard about this project for a chance to understand the STEM industry, we were ecstatic. After reading the original project/rubric, we investigated about more popular fields we could research about, and Software Developer caught our eye. From the initial analysis, we continued on our path to discover more and more about the profession and how we can apply our current skills from Robotics to this high-skilled level job.

~What is a Software Developer?~

A Software Developer has many different tasks and can vary in detail from creating programs to do specific tasks on computers/other devices or can create something that entirely runs an entire device. This is usually determined by the companies they're working for and what the user experience is meant to be. Many ideals of being a Software Developer is creating and designing from creative mindsets because in most cases, they are working from scratch or are coming up with a brand new way to do tasks. These tasks could be developing new software and meeting requirements of what is needed or create upgrades for current software.

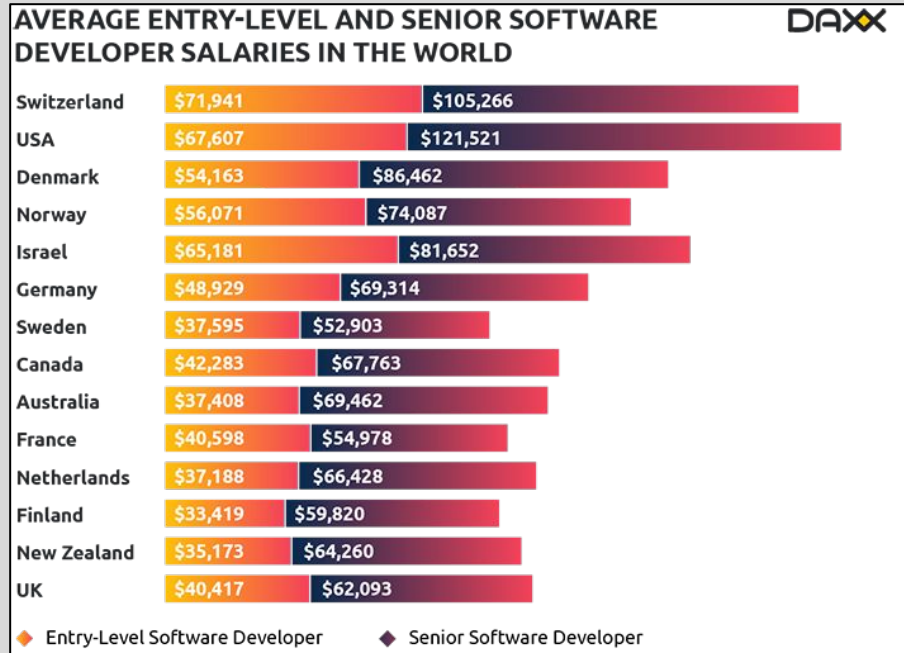# ~The Software Developer Design Process.~

~What Are the Social Skills Behind This Field?~

Another part of a Software Developer is working closely with other people, whether that's user interface or the programmers working on the project. Main criteria for this job is high leadership skills and the ability to work with others because of just how much is collaborative. First off, many people are working on one project such as the employer, developer, programmer, specialists, and other testers are just a few examples of people they have to work with. Many parts of creating this program is reworking, retesting, and redesigning from scratch. Without these skills, communicating what needs to take action and how to fix an issue will be extremely difficult.

~Salary of a Software Developer~

Now salary can vary from place to place but particularly, the average payment is $110,000 to $130,000. Now there are high and lower ends of being a Software Developer so that's mainly why wages vary. Now as the years continue, the wages are starting to gain because of the need for this field and lack of people willing to contribute to the field.

AVERAGE ENTRY-LEVEL AND SENIOR SOFTWARE DEVELOPER SALARIES IN THE WORLD

DAXX

Country	Entry-Level Software Developer	Senior Software Developer
Switzerland	$71,941	$105,266
USA	$67,607	$121,521
Denmark	$54,163	$86,462
Norway	$56,071	$74,087
Israel	$65,181	$81,652
Germany	$48,929	$69,314
Sweden	$37,595	$52,903
Canada	$42,283	$67,763
Australia	$37,408	$69,462
France	$40,598	$54,978
Netherlands	$37,188	$66,428
Finland	$33,419	$59,820
New Zealand	$35,173	$64,260
UK	$40,417	$62,093

◆ Entry-Level Software Developer   ◆ Senior Software Developer

Source: daxx.com

~What Skills are Needed to Become a Software Developer?~

A regular high paying job in the software developing industry requires at least a bachelor's degree in computer science. Then, from there you need to get an apprenticeship somewhere to get practical experience for a better chance at a job offer. After that there are two possible outcomes. One, you get a job somewhere, after the apprenticeship concludes. You go back to college to get a masters degree to be more qualified compared than other people. During your time in college you need to master at least one programing language whether it be JavaScript, HTML, C#, or Python. More than one is not required but it makes for a better resume.

~What from Robotics has Helped Us For This Career?~

Our involvement in robotics will prepare us for this career by teaching us the basics of coding in terms we can understand. Using the block language of the VEX Code program, we understand how to code a path to get our robot from Point A to Point B. Also us coding the robot's movements helps us learn algorithms of input to output relationships. For example, we find out what will happen if we set the drive speed too high or not high enough. From there we debug just like anyone else.
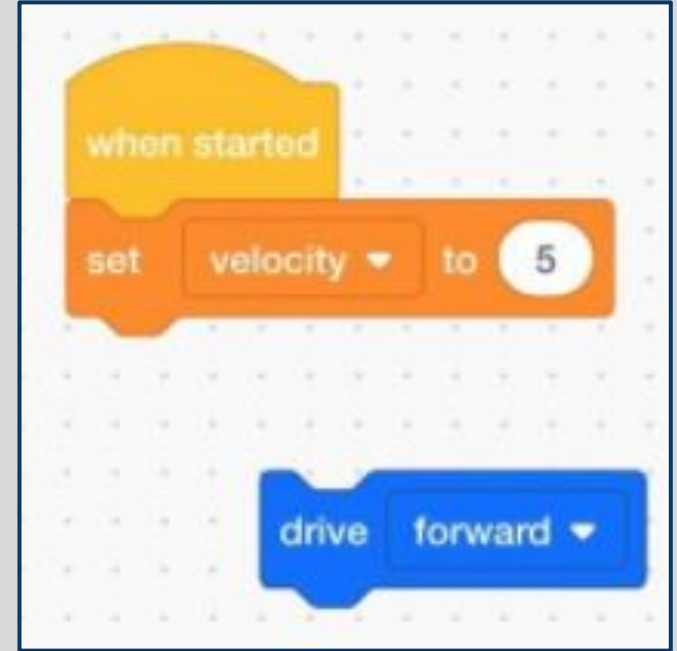
Also, our communicating and teamworking skills are a main in robotics for the STEM field. Majority of the time, we will be working with other teammates and it's is important to get our point across. Without the skills we have learned from robotics, getting along and creating a strong connection as a team would be extremely difficult.

How will it evolve over the next 10 years

Software Development as a whole, has grown in the few years it has been present. The internet is evolving and so is most STEM careers, including Software Development. As the internet continues to spiral and more occupations/people rely on the it, this occupation will start to become one of the most important professions for the future. This career focuses on making technological device software for easier and better use. This includes making updates, fixing bugs, and just creating new programs for newer products. This field is going to skyrocket into popularity as business and industries will need more of this profession in the upcoming future. Already, the field is estimate to grow by 22% in only 10 years! This is just an estimate on how fast this industry is growing and how important the field will continue to be in the upcoming future.

~Bill Gates~One Of The Well-Known Developers~

One well known person in the field of software development is Bill Gates. He has a net worth of 115.2 billion USD, gives 95% of their profits to charity and is still giving more, and he coded the first editions of Windows OS. He also has his own charity named after himself and his wife the "Bill & Melinda Gates foundation which makes really cool yearly letters about relevant topics affecting our world. Bill Gates has inspired both me and my partner is how he accomplished something big with Windows. He had the guts to create a whole new product, from scratch to develop a product that would change the way computer were used.

~Mala Gupta~ An Important Woman in Software Development~

Mala Gupta is a Developer advocate for JetBrains along with her newer company, eJavaGuru.com. Along with being a major developer in the community with 18+ years of education, she also strives in being a mentor, author, public speaker, and more. She has been recognized in the community by the Oracle Corporation and has spoken at many events such as JBCN Conference (Spain), C# Corner, Techfluence and Eclipse Day. As well as a major influence in the STEM community, she is also a female person of color which is also a main reason why we are inspired by her. She has done so much for this industry along with continuing to spread her knowledge. Just seeing a young women in the STEM field, when it is usually dominated by men is so captivating.

~Conclusion~

In conclusion, the Software Developer career is on a skyrocketing advancement in the upcoming future and creates a whole new world for the STEM field. The amount of knowledge, team building skills, and using the design process is major in this industry and it just continues to grow. As the field grows, so will it's popularity and we can't wait to see this change as we become older.

~Cited Sources~

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