

WKEXP 904 Work Term Report

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Work term 4

Computer Engineering Software Co-op

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1 Introduction

The purpose of this document is to serve as an exercise in creating a career plan, and setting some goals. As a part of this exercise, an initial career plan was created. Then, three graduate engineers at varying stages in their careers were interviewed. Finally, some similarities and differences in the interviewees's experiences were discussed, as well as some points raised which were unexpected or surprising. These points were considered, and the career plan was modified to mitigate any potential concerns which were raised after the interviews.

2 (Initial) Career Plan

2.1 Industry

In the wkexp902 report, I expressed interest in the Artificial Intelligence, or AI industry, and at the time of writing this report, it remains an area of interest for me.

2.2 Ultimate goal and how to get there

The ultimate career goal is obviously to get to a financially stable state, living comfortably, and being able to afford a reasonable amount of luxuries. There are many ways to get there, and several books claiming to share some 'secret', however, the general trend appears to be that these books tend to help the authors reach their financial goals instead of the reader. A more pragmatic approach should be taken which acknowledges the existence of uncertainty in the real world.

The first thing that should be acknowledged when making an initial career plan is that I have little experience. So, the first step should be to get in touch with experienced individuals, and ask for their advice. Luckily, that is the purpose of this report, so the first step is already done.

The next thing to think about would be what I plan to do after graduation. At this point, there are many areas in the software engineering field that I have not experienced yet. Even though I think that right now Artificial Intelligence might be interesting, I might find out later that I find another area to be more interesting. There is no way to figure that out without first trying, so the plan for immediately after graduation is to try out working for different companies in different areas in the software engineering field. The idea is to spend 1-2 years at various companies, and switch when it is natural. For example, if I plan to move to a different city, or an exciting opportunity arises. Doing this would also have the benefit of easily building my network for people, and making that network as diverse as possible. In addition, this would have the benefit of allowing me to absorb as much knowledge as possible, keep my skills up to date (as well as acquiring new ones), and keeping me competitive in the job market.

When I find myself comfortable, I think the plan is to never stop job searching. This will allow me to stay competitive in the job market[1], while I get to work in a field that interests me. It will also keep me on the lookout for better opportunities.

2.3 Roles to undertake

For the first few years in my career, I plan to take hands-on roles which involve programming in various languages. The next natural progression would be to end up in various senior developer positions. After that, I could choose to take on manager roles as well. By this point, I should be in a comfortable position, financially so I could also choose to create a startup using the experience gained from all the previous years of work, or use the same experience to lead in a larger, already established company.

2.4 Training

The software engineering field is always rapidly changing. I would have to keep myself up-to-date to keep myself competitive in the job market. One of my goals is to work in an environment which encourages continuous learning. Ideally, learning new skills would be encouraged at work, and the employer would provide opportunities such as attending conferences for sharing knowledge and networking.

2.5 Timelines

I do not have any specific timelines in mind, however, it is a good idea to have a general idea of where I would like to be in a few years. I think that I should find myself in a senior developer position within 5 years from graduation, however, there are so many variables to consider for a longer timeline like 10 or 20 years. In that time, priorities, interests, (or anything really) could change. I think around the 10 year mark I would at least like to lead a large-scale project. At this time, I will not set a specific goal for the 20 year mark, because too many things can change in that time. One thing I think I would like to keep constant however, is continuing to learn new things, and keeping myself up-to-date in the field.

2.6 Interests, strengths, weaknesses

My interests obviously include “programming”, however as that is such a broad topic, I should probably select a few subcategories that interest me. At the moment, some technology trends I have been following are artificial intelligence, RISC-V, Rust, WebAssembly, cryptocurrency and more. There is no way to know which trends will appear in the future which will interest me, so that is for me to figure out in the future. However, in general, I think an area I might enjoy is server backends. One of my strengths is a healthy amount of curiosity and desire to learn how things work. However, this strength can be a double-edged sword. One of my weaknesses is being tempted by a new language or framework just because

it is new, even when there is an existing solution with more community support, and better documentation.

2.7 Potential setbacks

Life happens, and there is no way to predict it. Situations that may arise include recessions in the economy, being laid off, and supporting a family down the line. If planned, starting a family is not a setback. Risks like the economy not doing great at certain times, and unexpected layoffs can be mitigated by following generally agreed-upon financial best-practices like maintaining 6 months worth of salary in an emergency fund that is liquid and easily accessible, but also gains interest [2]. This would also help mitigate other unforeseen circumstances.

3 Job Search Plan

3.1 Preparation

3.2 Research and Networking

3.3 Tools and Resources

3.4 Potential Obstacles

4 Interviewing Graduates

4.1 Similarities

4.2 Differences

4.3 Surprises and Points I Have Not Considered Yet

4.4 Unexpected Issues In Career Development Discovered

4.5 Changes to my career plans

References

- [1] J. Kleiman, *5 reasons you should always be looking for a new job*, Sep. 2015. [Online]. Available: <https://www.forbes.com/sites/work-in-progress/2015/09/28/5-reasons-you-should-always-be-looking-for-a-new-job/#26b3edbb2318>.
- [2] *Personal finance for Canadians*. [Online]. Available: <https://www.reddit.com/r/personalfinancecanada/wiki/money-steps>.