Professional Career Development

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Module: BMSW4005_LON

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Task 2: Report

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Introduction and Career Path

Ever since I was incredibly young, I was very curious about the inner works of computers and their programs. This led me to spend most of my childhood with computers and tinkering with electronic parts during my free time. Soon enough I was introduced to artificial intelligence, and I was captivated by it. I immediately knew I wanted to create and program AI models from scratch in the future by pursuing a career in AI Engineering. AI engineering is a profession that needs a solid background in computer science and engineering, as well as a thorough understanding of machine learning and data science techniques. But what is AI?

Fundamentally artificial intelligence (AI) is a branch of computer science and engineering that seeks to create intelligent machines capable of thinking and acting like humans. It entails the creation of algorithms and systems capable of analysing, comprehending, and making decisions based on data and information from the environment. Overall, AI has the ability to enhance our capabilities and improve the way we live and work.

In the near future AI will be more prevalent in our society and will have an enormous impact on our day to day lives. It will be used in various sectors such as Technology, Medicine, Finance etc. I strive to develop those kinds of AI in order to facilitate our everyday lives by becoming one of the best in my field.

Recruitment and Selection (Gibb's)

For an assessment, me and my classmates were tasked to pair up in groups of two and roleplay both as an interviewer and interviewee in front of the class. These roleplays were held in the 9th and 10th week of the third term of Academic Year 2022-2023. As an interviewer, we were expected to ask 5 questions to the interviewee both easy and hard ones that require a bit of reflection on the responder's part. After conducting the interview and making sure all the questions were answered both from the interviewer and the interviewee, we were supposed to change our roles and conduct another interview in order to get assessed in both roles.

Before the interview I was extremely nervous and full of anxiety as I am sure many of us were as well. However, during the roleplay I felt greatly confident in my abilities mostly due to the encouragement from my friends and peers. After the interview I was relaxed and happy to have

concluded the roleplay. I was a bit underprepared since I only started making questions for the interview a day before and also researched some of the most frequent questions asked. These questions asked by the interviewer are used to determine if the applicant is a good for the company, their competency, their goals, their skills, and what kind of a person they are in general.

Overall, the role play went well both for me and my partner. We made sure to practice as much as possible online the day before the assessment in order to develop good body language skills and seem as natural as possible. We also made sure to present our work on the 10th week so that we could accumulate enough knowledge by listening to the other students' feedback from the lecturer and avoid making the same mistakes. Part of the reason as to why we managed to do a good roleplay is because of my partner. We previously paired up together in the second term for a group assessment thus I already knew how to cooperate with my partner instead of searching for someone new. I have terrible time management problem thus if left on my own, I would have procrastinated until the last second and probably come up with the interview questions on the spot but having a partner who's reliable and likes to get the job done in advance ensured me to do the same and keep up pace.

Looking back, I learned a lot of strategies and information during my course and individual research to apply in a real interview. It was imperative to wear something formal or adequate for the interview so as to provide a good first impression. It's also good to research and learn everything about a company and the exact role before applying. This helps to grasp the company's mission, culture and values as well as provide a better understanding of the position. Generally, it is advised to arrive early for the interview because of traffic or any other unexpected delays. Preparing a convincing cover letter and making copies of the CV during the interview is also recommended. Lastly and most importantly is to be myself. It is crucial to be genuine and authentic with the answers during the interview process. These simple strategies can be applied both in structured and unstructured interviews. Next time when I have to apply for an interview, I will keep in mind all this information and will not start preparing at the last moment like this time.

Current Skills

Soft skills and hard skills are kinds of skills that a person must have to be successful in their work. Hard skills are technical talents that are unique to a job or sector, whereas soft skills are more general skills that may be applied to a wide variety of jobs and industries.

Because hard skills are specific information or talents that may be obtained through education, training, or experience, they are usually easier to quantify and demonstrate. Hard skills include knowledge of a certain software program, the ability to speak a foreign language, and experience in a specific subject such as finance or engineering. Because they are closely tied to the specific activities and responsibilities of a certain profession, hard skills are frequently stressed on resumes and in job descriptions. During my years in high school, I learned to programme in several programming languages such as C, C++, LabView, PLC and was also taught how to operate Arduino and Raspberry pi. I developed a sense of understanding how electronics work while doing projects in the laboratory. Later on, after graduating, I started learning to programme in Python on my own by following instruction manuals and watching videos in YouTube. Soon enough I grasped the basics of Pythons. However, I believe my knowledge in programming is not sufficient enough to start developing an AI yet, thus I want to take on several more projects in the upcoming years and learn more about developing AI from scratch. Some of my less relevant hard skills include the ability to speak in 6 different languages out of which I use 3 languages in my day-to-day life.

Soft skills, on the other hand, are more intangible and difficult to quantify. They are personal characteristics that allow a person to engage well with people and adapt to various settings. Some of my soft skills include excellent communication, able to work in a team and adapt to various changes in the group, good leadership skills and critical thinking skills. These abilities are sometimes referred to as "people skills" or "interpersonal skills," and they are required for success in any career that requires interacting with others.

Skills Required

AI engineering is an interdisciplinary field that involves applying engineering principles to design, build, and maintain AI systems. As such, AI engineers should have a solid foundation in both computer science and engineering, as well as a familiarity with a variety of AI techniques and technologies. According to some of the most frequently used job searching websites such as Indeed and Totaljobs, these are some of the general skills that employers look for in an applicant that I lack:

- Programming: It is recommended to be proficient in at least one programming language, such as Python or Java, and be able to write clean, efficient code. Since over the years I

tried to learn multiple different programming languages, I did not get much of a chance to master one single language. I intend to occupy myself with only Python in the upcoming few years so that by the time I graduate university I will be fairly good at coding in python.

- Machine learning: AI development companies usually look for AI engineers who have a strong understanding of machine learning algorithms and are able to implement them in practice. This includes being able to choose the appropriate algorithm for a given task, tune its hyperparameters, and evaluate its performance. It is possible to deepen my understanding of machine learning through university courses.

- Computer Science/Applied Mathematics Diploma: As mentioned previously, having a good understanding of mathematics and being digitally competent is imperative in order to advance in the AI sectors. While a degree is not necessarily required to work in the field of AI engineering, it can help to demonstrate my knowledge and commitment to the field. I already possess the basic knowledge in applied mathematics and am digitally competent but not enough to apply for an actual job though.

- Data engineering: AI engineers are expected to be skilled at working with large datasets and be able to design and implement efficient data pipelines. This includes being able to extract, transform, and load data from a variety of sources, as well as perform basic data cleansing and pre-processing tasks which I am not remarkably familiar with at the moment.

- Gain practical experience: In addition to theoretical knowledge, It is best to use that knowledge and seek out opportunities to apply in a real-world setting. The only experience I have at the moment is able to create simple automations with electronics parts thus I conclude that I need more experience working in an actual work environment.

Personal Development Plan

	Short-Term Time Frame	**Long-Term Time Frame**

	Things to accomplish within the next year	Things to accomplish within the next 3 to 4 years
Section 1 - My Goals	Learn about the basics of coding, AI and Machine Learning technology	Apply in an AI development company as a beginner and work up from there until I become a Senior AI Engineer
Section 2 - Skills and Knowledge to be Learned	Learn how to code in Python, start with several small projects until I can complete a bigger project on my own	Become highly proficient in coding with Python, gain deep knowledge in machine learning, obtain a degree in Computer Science
Section 3 - Next Steps	Enrol in university and start studying in Computer Science with Artificial Intelligence, Individual studying, and research	Attend a bootcamp for Python programming or take on internships
Section 4 - Resources	Get access to resources from	Learn directly from experts in the work environment and

	university and online (YouTube, E-Books)	gain practical experience

Conclusion

In conclusion, I am pursuing a career in AI engineering because I will be expected to encounter a different problem every day and produce different solutions and ideas to solve them. For me personally it is a decent career to pursue without getting bored from the daily repetitive tasks that are present in other careers. It is also the kind of work that prioritizes thinking more than physical labour. I believe in the near future most household items and electronics will be heavily dependent on AI thus the demand for AI Engineers will skyrocket.

References

1. Babić, V. and Slavković, M., (2011), 'Soft and hard skills development: a current situation in Serbian companies', *Proceedings of the Management, Knowledge and Learning International Conference,* pp. 407-414. [28 December 2022].
2. Cottrell, S. (2021), *Skills for Success: Personal Development and Employability*, Macmillan Education UK, London. Available from: ProQuest E-book Central. [26 December 2022].
3. GlaxoSmithKline (2022), AI/ML Engineer, Available at: https://www.totaljobs.com/job/ml-engineer/glaxosmithkline-job99263994. [28December 2022].
4. Good Boost (2022), *AI Engineer*, Available at: https://uk.indeed.com/jobs?q=Ai+Engineer&l=&from=searchOnHP&vjk=218b98d04732cf19 [28 December 2022].
5. Neugebauer, J. & Evans-Brain, J. (2016), *Employability: Making the Most of Your Career Development*, SAGE Publications, Limited, London. Available from: ProQuest E-book Central. [28 December 2022].
6. Warwick, K. (2012), *Artificial Intelligence: the basics*, Routledge, New York. [22 December 2022].
7. Zhang, A. (2012). 'Peer Assessment of Soft Skills and Hard Skills', *Journal of Information Technology Education: Research, 11*(1), pp. 155-168. Informing Science Institute. Available at: https://www.learntechlib.org/p/111498/. [24 December 2022].

Appendices

Appendix A

The questions asked as interviewer in the role play (A1)

1. What are the reasons you have applied for this job?
2. How would your colleagues describe you?
3. What is your biggest weakness?
4. What are your career goals?
5. Why should we hire you?

The question/s asked as interviewee in the role play (A1)

1. What kinds of resources do you provide to employees outside of work for further productivity?

Appendix B:

Application Form completed as applicant for the role play (A1).

Job application form

Application for [job title] - AI Engineer

Your details

Name: Md Ashiqur Rahman

Education and training

Please give details:

University of Wales Trinity Saint David

ITIS Carlo Zuccante

Giuseppe Ungaretti

Qualifications

Please give details:

Cert HE in Skills in the Workplace (02/2022 - 02/2023)

Diploma: GCSE

Employment history

Your current or most recent employer

Name of employer: Mohammad Ali

Job title: Shift Manager

Length of time with employer: 13 months

Reason for leaving: Change of Career

Duties: Managing the shift and training new hires

In charge of the shift and training new hires

Previous employers

Please tell us about other jobs you have done and about the skills you used or learned in those jobs.

No previous jobs

Supporting statement

Please tell us why you applied for this job and why you think you are the best person for the job.

I applied for this job because this is the career I would like to pursue. Furthermore, I am a suitable candidate for this role because I possess the necessary skills required to be successful in this field. I am confident in my abilities and am diligent.

Right to work in the UK

Do you need a work permit to work in the UK? Yes / No

References

Please give the names and contact details of 2 people who we can ask to give you a reference. We may ask them before an employment offer is made. We will not ask your current employer until we get your permission.

Declaration

I confirm that to the best of my knowledge the information I have provided on this form is correct and I accept that providing deliberately false information could result in my dismissal.

Name: Ashiqur

Signature:

Date: 29/12/2022