Kavan Mehta

Ms. Whitcomb

ISM 2

21 October 2022

**Interview Assessment #7**

**Name of Professional:** Alexander Moini

**Profession/Title:** Machine Learning Engineer

**Business/Company name:** Expedite Commerce

**Date of Interview:** 10/07/2022

**Assessment:**

My first interview was with Mr. Moini, a machine learning engineer at Expedite Commerce. Through this interview, I hoped to learn about what I can do in natural language processing (NLP), how to learn about the specifics of natural language processing, and how to apply natural language processing in my future ISM product. During the interview, I gained a great understanding of what steps I can take next to dive deep into natural language processing and its applications.

I first discussed with Mr. Moini how I could start learning about the specifics of natural language processing. We had a great conversation about the natural language processing library, HuggingFace, and how it has become one of the biggest resources for creating pre-trained transformer models. Furthermore, we also talked about the limitations and the extensive training resources needed to create your own transformer from scratch. While it would definitely be an excellent skill to create a transformer model from scratch, I learned that it would be best in terms of time and resources to learn the theory separately and use the HuggingFace library to create a

project with an already established transformer model. He also suggested solving problems to begin learning NLP quickly and gain practical experience, as it can help me practice concepts and their applications hands-on. I also agree with this statement and plan to start some implementation after I get a foundation in theory behind NLP. I was also able to get some pointers to learning the mathematical theory behind transformers, and I hope to use my research assessments to think through the theoretical part of the applications of NLP. I also learned something very new: the true importance of deployment and user interfaces with machine learning models is immense. This was quite unexpected for me to learn that the most important factor of any technology is its usability, without it, it doesn't serve any purpose. Being able to put the technology into a usable form would be something that I put extra focus on this year, considering that I only focused on the technology side of machine learning for my original work and final product last year. I also requested some resources that I could use to learn more about natural language processing applications to help myself with my original work.

We had a great discussion over specific use cases of natural language processing, such as voice assistants and word autocomplete. We explored the possibilities with new upcoming technologies such as the Google Duplex that can automatically schedule appointments by just using your schedule. Furthermore, the Google Assistant would talk to humans with a voice emulator and could have casual conversations with human-level understanding and reasoning. We also discussed his work at Expedite Commerce and how they use natural language processing to understand the customer's values and help salespeople make the final sale by properly addressing needs. These examples also helped connect to my understanding of multiple applications of machine learning and computer vision from last year. I realized that natural language is such a grand sector in machine learning itself that everything from machine

translation to text prediction presents an enormous opportunity for me to explore my original work and final product in ISM 2. This discussion helped me understand what areas I could explore with my projects in my original work with real-world examples of NLP applications.

Overall, I felt that the session was really helpful in guiding me to learn about natural language processing through experimentation with projects. I want to use this acquired practical knowledge to create a sophisticated product that can be used in the real world. I aspire to continue enhancing my understanding of NLP through research and start my original work soon!