COVER LETTER

In 2018, I stumbled upon a YouTube video by DeepMind on an artificially intelligent agent named AlphaGO. Hitherto, no artificial agent was built to beat humans in GO, but this AI could beat the world champion Lee Seedol by a considerable margin. AlphaGO came up with a novel move in the 37th turn, which redefined the history of this game and it helped humans to go beyond limits. So I was drawn to this symbiotic relationship between humans and machines and it was the start of my journey in the field of AI and ML.

After that, I started learning these tools from MOOCs and research publications. After having an understanding of the use cases of these tools, I started applying them in multiple domains. In my academics, I utilized these tools for thermal analysis of heating devices which turned into a publication and anomaly detection in big-scale infrastructure at my college. These projects reinforced the idea that data science is just an efficient tool that can be plugged and applied in all fields. Thus, I diversified my application areas like image, language, and financial markets.

In my sophomore year, I started actively trading. But I couldn't generate substantial returns. Then I learned about Jim Simons, who emphasized that data is key in making financial decisions but humans sometimes give up on emotions and adopt strategies based on heuristics. But data-driven approaches can open many possibilities for every to get into the financial market and grow their assets for a better quality of life. This inspired me to get into the financial world. I am particularly interested in Reinforcement learning, which is an extension of Machine learning. Here, an artificial agent like humans makes decisions based on reward signals. So in my opinion, sometimes "Reward is Enough". I have been involved in internship projects at the University of Liege, Belgium, and open source projects like FinRL from Columbia University, New York. Here, I have worked extensively on improving and explaining the trading agent's decisions, which is essential in the financial world. Also, it helped me to upskill my knowledge of different AI and MLOps tools. It also improved my collaboration and communication skills as I was interacting with people across the

world and collaborated on research projects. Working in the financial world has helped me to grow my skills in software development and algorithms, and enables me to transfer my skills to multiple domains.

Even if my bachelor's academics didn’t cover these concepts, I went out of my way to learn these skills and successfully apply them in a multitude of fields. This shows my genuine curiosity and willingness to learn, which is essential in this field as the paradigm shifts in a matter of months. I have experience both in the research and application front, so this weighs in on my credibility to improve and contribute in this field. My repertoire of projects and internships instills confidence in me that I can go beyond my limits to get the task done. Having a high-level picture view that the relationship with AI will be conducive for us, will give me the inspiration to put in efforts every day and multiply my own and the firm's outputs.