Personal statement

I decided to write a personal statement even if it was not required in the application because I intend to offer more details about my background and about what motivates me to apply for Oxford Machine Learning Summer School. I am going to shortly talk about my past machine learning and data science projects, my career prospective and how the school will help me to achieve my career goals.

The most important Machine Learning project I contributed to was a state of the art calibration project at Porsche Engineering Romania. My responsibility was to create machine learning models that improve the functionality of the car components leading them towards self-driving capabilities. For this project I applied a series of reinforcement learning algorithms, each of them based on a different underlying method. To name but a few, I used Monte Carlo algorithm as sample-based method, Q-learning that is based on single-step temporal-difference method, or actor-critic algorithms that utilize parametrized policies and function approximations. I measured the performance of all the algorithms in terms of generated return and picked the optimal one.

Prior to this, while I was working at Jibe, I worked on a project whose purpose was the segmentation of potential car clients from The Netherlands. I applied random forests and naïve bayes for enframing future clients in the created segments. Another interesting project was forecasting online product sales for one of our clients. I applied time series algorithms, such as Holt-Winters, on data related to products that our client was selling online.

My future career plan is to become an outstanding machine learning researcher in the healthcare field. Currently I am a Data Engineer because I wanted to accumulate even more knowledge into the data field that will be useful for me in this dreamt future career. I am interested to work in the healthcare field because I was astonished when I read that Watson supercomputer correctly diagnosed a rare type of leukemia in patient from Japan in ten minutes! Moreover, I was amazed to hear that DeepMind Health is developing machine learning algorithms to differentiate between cancerous and healthy tissues for not damaging the healthy ones during radiotherapy. That is why I want a career in this field in the medium to long term.

This summer school will bring me one step closer to this dreamt researcher career in the healthcare system by providing me with a deeper understanding of deep learning methods, such as computer vision and geometrical deep learning, and by presenting practical examples from industry. This is exactly what I want: theory combined with applications! Additionally, the school will facilitate me to become part of a network of experts in machine learning, such as PhD students, scientists and professionals, that I will be able to ask for advice at some point in my career, or even work on projects together.