Dear Dr. Bert de Vries,

I am writing to apply for the position of PhD on probabilistic programming for machine learning. After 3 years of work experiences, I am aware of that I am passionate about the machine learning methodologies. Data scientists in industry is definitely attractive. However, I pursue to be a creator like machine learning researchers. Therefore, achieving a PhD degree is my first step to devote to machine learning and statistical methodologies.

In my career, I encountered multifarious machine learning problems, those problems make me realize that what I learn is insufficient to solve them all and I need to learn more and explore more in machine learning field to overcome them. For example, I learned the change point analysis to overcome the insufficiencies of traditional SPC, I have developed a series of statistical methodologies to detect the small changes on wafer process. Because the even a little change may cause the yield of wafer lower than usual and we cannot just tighten the limits of SPC to make the discontinuity of manufacturing more frequent, we choose to detect the small changes by statistics.

Addition to continue to strengthen machine learning skills, I also learned the skills to process massive volume of data like 6 billion in a day, software engineering and software development like CI/CD. It seems to me that it helps me to provide practical, performant and maintainable machine learning toolboxes. For instance, I volunteered to pack several R packages for my team to reduce the chances of reinventing the wheel. It effectively decreased the time to deliver new machine learning methods on quality control.

Sincerely,

Ching-Chuan (Jamal) Chen