Hoang**Nguyen**

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I enjoy learning, teaching and doing research. My main interest is theoretical machine learning, especially graphical models, submodularity, and random processes on graphs.

Dear Ms./Mr. recruiter of Google Brain Residency Program,

Being a part of Google Brain team will be the best opportunity for me, and probably for any computer science majored student. For this reason, I decided to apply to the Google Brain Residency Program.

To me, the co-worker is the most important factor in a workplace. During my Master studies in Japan, I have met many new friends and also become very close with a few. One of my close friends is a cheerful, nerdy, and muscular guy. I enjoyed working with him on our hackathon project and sometimes network hacking just for the fun of it. I learned a lot him. It turns out he studied his Master degree in the US and did two summer internships at Google. Honestly, I never thought much about working at Google before, maybe because I fear I am not good enough. However, after a year of hanging out with this "Google-Intern" friend, I *want* to be at Google. I want to work with and especially learn from awesome people like my good friend.

The curiosity about linked entities and network science motivates me pursuing higher degrees. As a network science practitioner, I find complex networks and graph-structured data excitingly difficult. Traditional methods designed for network analysis such as spectral methods, or statistical methods only give us a very blurred and limited view of complex networks (networks with more than tens thousand of nodes). On the other hand, modern pattern recognition models such as deep Boltzmann machines, generative adversarial networks, or deep convolutional networks seems to be designed (and work best) with highly regular data structure (images, speech, words, etc.). My main interest is to apply deep generative models to graph-structured data (e.g. knowledge graphs) to understand the underlying mechanism of that complex linked system. I believe to be able to join Google Brain team will give me access to mentorships from leading experts in the field of generative models and deep models, which will help me pursue my curiosity and research career.

Reading Professor Richard Feynman's book, I found myself in the description of one man named Frederic de Hoffman. Feynman described him as follow: "Not highly trained, he liked mathematics, and worked very hard; he compensated for his lack of training by hard work". I have been working with determination in Japan to catch up with the high world standard in the field of Computer Science. I am not a fast learner, but a deep one. I hope that there will be a chance for me to be considered at the Google Brain Residency Program.

Sincerely,
Hoang Nguyen.