清华大学自动化系学生专业实践考核表

学生姓名： 柳荫	班级： 自 45	学号： 2014011858

专业实践内容、时间、接受单位：
探究深度网络的结构对其 regularization 以及 generalization 性能的影响。
06/26/2017 ~ 09/17/2017
康奈尔大学

自我评议：

Through this several weeks' major practice, I have felt and learnt a lot of things. From the proficiency in PyTorch framework to think of my own ideas and then to implement them, I have been polished up in my computer science skills, specifically, in deep learning analysis ability.

The DenseNet is one of the greatest deep net architecture, which, however, doesn't mean that it is perfect. I am trying to do the analysis of its hidden tricks, and trying to find out the value of 'skip connection'.

My personal work may seem trivial when being compared to Dr Gao's DenseNet, but at least I will consider my work as a guidance or a novel direction to lead others to discover more, such as my supervisor Prof Hopcroft, who will focus on the theoretical field of machine learning in the following years. I hope I have done some contribution to this field.

学生本人签字： 柳荫　　日期：2017 年 9 月 14 日

接受单位评议（包括完成的课题内容、考勤及工作表现）

Yin Liu did a good job during the summer internship. He mainly worked on designing experiments to understand the generalization ability of deep neural networks with different architectures. Although he was not very familiar with deep learning libraries at the time of arrival, he worked very hard and learned things quickly. This enables him to run extensive experiments with ResNet, DenseNet and traditional convolutional networks. There are several interesting findings from these experiments, e.g., DenseNet tends to generalize better when training data is insufficient, and it is more robust to noise in the training data. I'm satisfied with Yin's performance, and hope he can keep working on machine learning, especially on understanding why deep models generalize well.

负责人签字： John Hopcroft　　单位公章 COMS　　日期：2017 年 9 月 14 日

考核小组意见：

签字：　　　　日期：　　年　　月　　日