Master Internship 2015
Object Localization with Deep CNNs

Supervisors
Dr. Hanlin Goh – hlgoh@i2r.a-star.edu.sg
Mr. Olivier Morère – olivier.morere@etu.upmc.fr

Keywords
Deep Learning, Convolutional Neural Nets, Object Localization.

Project Description
Deep models such as Convolutional Neural Networks (CNN) have recently led to major breakthroughs in image classification, closing the gap with human vision in a number of tasks. CNN models are however not directly designed with localization of the classified objects in mind and are not nearly as good at this task. Although a number of methods have been proposed to use CNNs for localization, accuracy and/or speed of the predictions must still be improved.

During this internship, we will overview the state-of-the-art on localization using CNNs and explore different ways of improving upon it. Then, we will investigate how accurate information on localization can in turn help with classification.

Applicant Profile
- Master Degree or Engineer Student (last year of studies).
- C++ (preferred) or Java
- Python (preferred) or Matlab
- Solid background in mathematics.
- Basic understanding of machine learning.
- Availability for 5 to 6 consecutive months.

Gratification: About 800€ net per month (approx. 1.300 Singapore dollars)

Contact email: hlgoh@i2r.a-star.edu.sg