

Master Internship 2015

Deep Learning: Solving the Detection Problem

Supervisors

Dr. Antoine Veillard – antoine.veillard@polytechnique.org

Dr. Vijay Chandrasekhar – vijay@i2r.a-star.edu.sg

Image & Pervasive Access Lab
1 Fusionopolis Way
#21-01 Connexis, South Tower
Singapore 138632

Tel. (65) 6408 2542
Director. (65) 6408 2536
Fax. (65) 6776 1378

secretariat@ipal.cnrs.fr
www.ipal.cnrs.fr



Keywords

Deep Learning, Object Detection, Multi-Labeling.

Project Description

Deep learning algorithms such as convolutional neural networks dramatically changed the computer vision landscape by outperforming other state-of-the-art models in many object recognition tasks. Most benchmarks so far take place in the classification context, where an image known to contain a relevant object has to be labeled using one of the known object classes. In comparison, the use of deep learning algorithms in the object detection task is much less investigated.

During this internship, we will work on several aspects related to object detection including ROC characteristics of detectors, the multi-labeling problem -multiple instances of the same object and/or instances of multiple different objects within the same scene- and localization within the scene.

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: antoine.veillard@polytechnique.org