

Image & Pervasive Access Lab
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Keywords

Deep Learning, Online Learning, Google Glass.

Project Description

In this internship, we plan to bring together two exciting topics in computer vision - wearable computing and deep learning. Google Glass holds promise as we move beyond the era of cell phones into one of wearable computing. Meanwhile, deep learning has led to an incredible improvement in performance in recent years on several visual recognition tasks.

Training deep learning models able to differentiate between thousands of object classes from scratch can typically take up to several weeks on modern GPUs and requires vast amounts of data. In comparison, online-learning algorithms able to quickly adapt existing deep models to new classes using a small quantity of data remain under-investigated.

The applicant will explore how deep learning classification techniques can be used to help a user understand the world around him or her. Real-time video footage from Google Glass will be analyzed to find existing categories of objects in a database and learn new ones on the fly.

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 (or 1.300 Singapore dollars)

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