

# **Embedded System Design**

## **Assignment 3**

This homework corresponds to

- Attendances: Week 6 and 7 (2% of total score)
- Homework 3: (10% of total score)

What to submit: Report only

- There is no fixed report format, except for the hard page limit, which is 8 pages.
- Rename your report to your\_student\_num.docx (or hwp), (ex: 2015123456.docx) and submit it.

Deadline: Refer to I-Campus

### **1. Image Classification with image files, a video file, and camera. (5% of total score)**

Watch the lecture of Week 11-1. Once you are done, do the following.

1. Image recognition with image files
  - A. Download Images.zip.
  - B. Unzip it in Jetson.
  - C. Perform image classification with the five images that you unzip.
  - D. Capture the results for all the five images and attached them to your report.  
(You do not need to add any explanations on them.)
2. Image recognition with a video file
  - A. Download video.mp4.
  - B. Perform image classification with the video file.
  - C. Capture a result (Just one result in random point in video) and

attached it to your report.

(You do not need to add any explanations on them.)

D. Upload the output video file that you get after doing image classification, along with your report.

3. Image recognition with camera

A. Do a camera demo for image classification.

B. Capture three images during your live camera demo. A capture should include the classified object and its accuracy.

(You do not need to add any explanations on them.)

C. Attached them to your report.

## **2. Object detection with image files, a video file, and camera.**

**(5% of total score)**

Watch the lecture of Week 11-2. Once you are done, do the following.

1. Object detection with image files

A. Perform image classification with the five images from Images.zip.

B. Capture the results for all the five images and attached them to your report.

(You do not need to add any explanations on them.)

2. Object detection with a video file

A. Download video.mp4.

B. Perform the object detection with the video file.

C. Capture a result (Just one result in random point in video) and attached it to your report.

(You do not need to add any explanations on them.)

D. Upload the output video file that you get after doing image classification, along with your report.

3. Object detection with camera

- A. Do a camera demo for object detection.
- B. Capture three images during your live camera demo. A capture should include the classified object and its accuracy.  
(You do not need to add any explanations on them.)
- C. Attached them to your report.