COMP 9517 – Software Requirements for Labs and Assignment 1

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For the labs and the assignment 1 it is required to use OpenCV 3+ with Python 3+. It is also recommended to submit your solutions in the form of Jupyter Notebooks (JSON-based *.ipynb* files), unless you prefer to use simple python script files (*.py*).

Python Installation

CSE lab computers have the required packages installed. For the installation of Python and OpenCV on your personal computer, it is easier to use a package manager such as Anaconda. Please download and install the latest Anaconda distribution suitable for your operating system from here: https://www.anaconda.com/distribution/.

Using Virtual Environments

It is better to create virtual environments using Anaconda to separate the workspace you will install and use OpenCV. You can create a virtual environment using any nominated python version (it is recommended to create a virtual environment with Python 3.6). Here is a guide on how to create and use python virtual environments using Anaconda: https://uoa-eresearch.github.io/eresearch-cookbook/recipe/2014/11/20/conda/. The Conda cheat-sheet is also helpful: https://docs.conda.io/projects/conda/en/4.6.0/_downloads/52a95608c49671267e40c689e0bc00ca/conda-cheatsheet.pdf.

Installation of OpenCV

Installation process of OpenCV differs from one OS to another (and some instructions may differ from one Python version to another). OpenCV website is always a good starting point to get help on installing the latest OpenCV: https://pypi.org/project/opencv-python/, however make sure you are searching and following instruction specific to the OS you are using.

Jupyter Notebook

Jupyter Notebook is an easy and clear way of experimenting with Python: https://jupyter.org/. Follow this guide to install and run Jupyter Notebooks from within a Conda virtual environment: https://medium.com/@eleroy/jupyter-notebook-in-a-virtual-environment-virtualenv-8f3c3448247.