COMP9517 – Software Requirements for Labs and Assignment 1

For the Labs and Assignment 1, it is required to use OpenCV 3+ with Python 3+. You are 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

The 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 the instructions 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.