

Computer vision A1 guide for students

Notebook to PDF conversion

- `nbconvert` command line function
- OR Export menu option in Jupyter notebook (this is just a wrapper for `nbconvert`)
- requires a working LaTeX installation
- test early and often! Your responsibility to ensure nicely formatted PDF

General formatting for submission:

- all figures clearly labelled and captioned
- use `matplotlib.pyplot` functions to size/arrange images in notebook and exported PDF
- see <https://matplotlib.org/stable/api/index.html>
- the notebook file (.ipynb) should contain short code segments and outputs only!
- move any supporting functions and longer code segments to separate files, e.g. `alcode.py`
- restart the kernel and rerun your notebook from start to finish immediately before submitting and generating the PDF file. Ensure all results are displayed and up to date.

Question responses:

This is a cut down version of our marking guide. It should give you an idea of what we expect for each question.

Q0 (5%)

- each exercise correct, output displayed

Q1 (10%)

- `load()` correct
- `print_stats()` correct
- display own images
- explanation of images

Q2 (25%)

- each function correct on examples provided
- quality of included extra tests
- explain contrast not reversible

Q3 (25%)

- `conv2D` correct on test case
- RGB conv correct

- Gaussian filter application correct
- include and explain different Gaussian filter tests
- Sobel filters application correct
- include different Sobel tests, display and explain

Q4 (35%)

- correct display of resampled image
- correct application of Gaussian and display/compare to 4.1
- correct Gaussian pyramid display
- comments and explanation of 4.2 outputs