Part 3: Proposal for Practical Applications

Weighting: **40%**
Due date: **10 June**
Task type: **short report**
Word limit: **800 words** (+/- 10%)
File format for online submission: **.pdf**
Please use **the report structure template** provided. You can use a flowchart or other graphical elements in your report to support your discussion.
Note: you **do not** need to implement your solution. You only need to write down a proposal.

In this task you will **discuss possible applications of one typical computer vision problem**.
You need to:

- define the problem and describe its application scenarios
- briefly describe a feasible solution based on image processing and traditional machine learning algorithms.
- briefly describe a feasible deep learning-based solution.
- compare the advantages and disadvantages of the two options.

You will work individually and **choose one** of the typical computer vision problems listed below (or suggest your own).

a. removing noise on the image
b. increasing the resolution of the image
c. identifying objects in the image
d. segmenting the area to which the image belongs
e. estimating the depth of an object
f. estimating the motion of two object in different frames
g. others

Discussion of possible real-life applications of your chosen problem (from the list above) may include the following:

- image editing systems in your phone
- improved quality of the old film
- sweeping robot avoiding obstacles
- unlocks the face of the mobile phone
- identifies the cancer area according to the medical scan image
- determines the identity according to the face
- identifies the trash can on the road
- and the detection system tracks the target object
- and more.