Deep Learning Assignment

Please pick **one (1)** of the following tasks (duration: **2 weeks**):

1) **Develop a machine/deep learning model for coloring grayscale images to color images**. Feel free to use any data you can obtain as you see fit.

OR

2) **Develop a machine/deep learning model for cropping images based on image saliency** (human attention in images). Given an image and a desired crop size (width and height), the model should return the suggested crop location/coordinate. Consider using the dataset SALICON for your purpose, but feel free to use other data as you see fit.

OR

3) **Develop a machine/deep learning model for generating photo portraits from sprite portraits; example shown in Fig. 1 below (generate bottom face given top face).** Feel free to use any data you can obtain as you see fit.

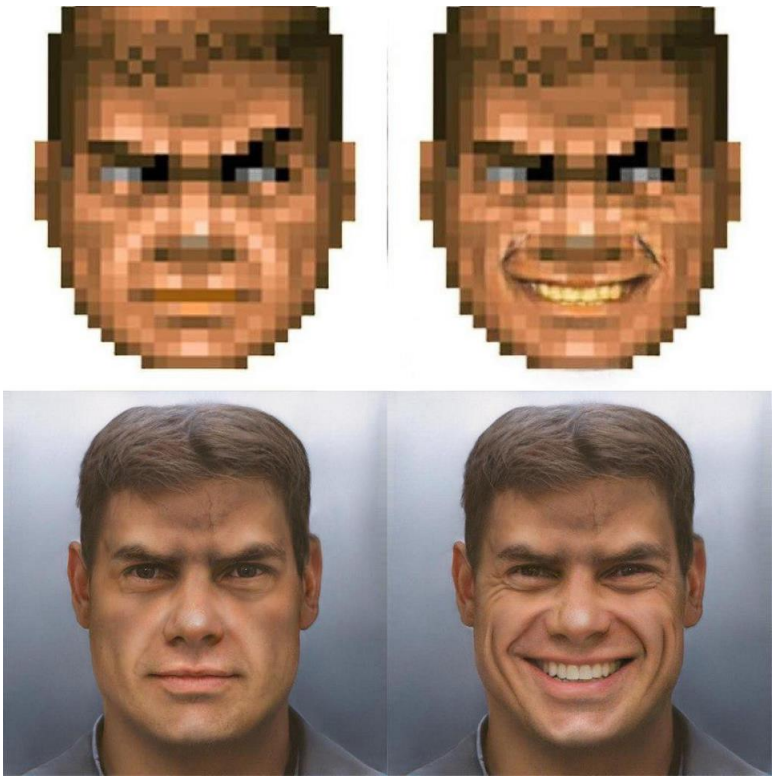

Fig. 1: Sprite face to real face

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You are required to:

1. Provide your source code with ample documentation describing the codes. Submit the source code via either email or a Git repository within **two (2) weeks** from the date of receiving.
2. Describe and summarize your approach in a PowerPoint slide and submit the slide together with the source codes.
3. Present your work during the interview if you have been shortlisted.

Note:

Due to the short timeframe, you will **not** be judged for not having a perfect model/method. By this, we hope that you will not have to use expensive computing resources. Nevertheless, feel free to use free computing resources like Kaggle or Google Colab, if needed.