

### **MSBA 503 Take-Home Assignment**

This assignment requires more effort than the in-class assignments. You may seek help from your peer(s) for review purpose only. If you do that, mention it in an acknowledgment section. It will not impact your grade. However, you cannot submit others' work or work jointly with someone. This assignment has two parts. Your final deliverable will be a Word document with a GitHub link attached to it. See below for detailed instructions.

#### Part A

- (i) Use two or more deep learning algorithms from the computer vision domain to extract objects from a series of images and compare their performance in terms of time, objects detected, and probabilities. You can choose a reasonable number of images for the purpose of analysis; my own suggestion would be at least 10 images. Collect these images from online sources and record the outputs for each of them. In the end, those outcomes will be presented in a tabular format. 10 points
- (ii) Can you extract anything else from these images with or without using deep learning algorithms? 4 points

Your Word document will have the comparison table and your comments on it. Do not write more than 2-3 sentences. Also, describe (ii) in the Word document with similar sentence limitations regarding what you did and the outcomes.

#### Part B

Upload the code to GitHub, create a well-written Read Me file, and attach the GitHub link to the Word document. Make sure the code in GitHub is well-commented. You do not need to upload the images on GitHub. The coding file should have the code and outputs printed. Make sure that your GitHub project is public. 6 points