**Programme: Higher Diploma in Artificial Intelligence and Robotics**

**Programme code: EG114728**

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| **Official Use** | | |
|  | Full Mark | Mark |
| **Total** | 100% |  |

**Module: AI and Programming**

**Module Code: MBS 3523**

**Assessment: Assignment 2**

**Due Date: 13 April 2021**

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**NOTES:**

* **Answer all questions.**
* **Full mark of this paper is 100.**
* **Attach your programs with this paper.**

**Submission deadline: 13 April 2021 5:00 pm**

“*I declare that this assessment is my own work and was not copied from any other person”*

*Signed: \_\_\_\_\_\_Lam\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_13/4/2021\_\_\_\_\_\_\_\_\_\_\_\_*

**NOTE:**

* For this assignment (Question 1 -3), you are required to demonstrate the operation of your programs with specific tasks/requirements that will be given during the demonstration section!
* You may bring your own notebook computer or use the computer in lab (webcam will be provided).
* You have 3 minutes for each question demonstration. That means a total of 9 minutes for the whole assignment. No extra time will be given unless there is a technical problem. Be aware and well prepare for the demonstration.
* The demonstration period is on **13 April 2021, 13:30 – 17:00**.
* If you cannot demonstrate any code, a reassessment will be arranged on 20 April 2021, 15:30 – 17:30. The maximum marks from the reassessment will be 40!

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| **Question 1 (30%)** |
| With reference to ***OpenCV-Ex5-FaceRec.py***, demonstrate:   1. your code with your own face with your name on top left corner of the bounding box; 2. how you can add a new known person (the photo of the known person will be given during demonstration time) and recognize him/her. When the code is run, the new known person’s name should be displayed on top left corner of the bounding box. |

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| **Question 2 (30%)** |
| With reference to ***OPENCV-17-colorTracking2.py*** and ***OpenCV-Ex6-Track2Colors.py***, demonstrate   1. the tracking result when ONE random color ball is given; 2. the tracking result when TWO random color balls are given.   C:\Users\200059050\AppData\Local\Microsoft\Windows\INetCache\Content.Word\Capture.PNGC:\Users\200059050\AppData\Local\Microsoft\Windows\INetCache\Content.Word\x.PNG |

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| **Question 3 (40%)** |
| With reference to ***OpenCV-Ex8-YOLO-track2objects.py***, demonstrate:   1. the tracking result, with correct names shown, when any objects within the COCO namelist are seen from the webcam; 2. the tracking result, with correct name shown, when ONE randomly selected object is specified; 3. the tracking result, with correct names shown, when TWO randomly selected objects are specified. |

**~ End of Question ~**