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| **Assignment Case** |  |
| COMP7116  Computer Vision |
| **Computer Science** | **O223-COMP7116-LO04-01** |
| ***Valid on*** *Odd Semester Year 2021/2022* | **Revision 00** |

1. Seluruh mahasiswa tidak diperkenankan untuk:

*All students are not allowed to:*

* + 1. Berdiskusi dan/atau bekerja sama dengan mahasiswa lainnya

*Discuss and/or work together with other student participants*

* + 1. Melihat sebagian atau seluruh jawaban mahasiswa lain

*Seeing a part or the whole answer from another student*

* + 1. Membuka dan menyalin dari **BUKU** atau **CATATAN**, **VIDEO** dari pengajar (recording kelas, VBL, Youtube, dsb) dan **REFERENSI** lainnya

*Open and copy from any resources such as notes, videos (class recording, VBL, Youtube, etc) and other references*

* + 1. Membuka dan menyalin jawaban dari internet (google, stackoverflow, dsb)

*Open and copy answer from the internet (google, stackoverflow, etc)*

* + 1. Mengerjakan soal yang tidak sesuai dengan tema yang ada di soal,

*Working with another theme which is not in accordance with the existing theme in the matter of the case,*

* + 1. Melakukan tindakan kecurangan lainnya,

*Committing other dishonest actions,*

* + 1. Secara sengaja maupun tidak sengaja melakukan segala tindakan kelalaian yang menyebabkan hasil karyanya berhasil dicontek oleh orang lain / kelompok lain.

*Accidentally or intentionally conduct any failure action that cause the results of the project was copied by someone else / other groups.*

1. Jika mahasiswa terbukti melakukan tindakan seperti yang dijelaskan butir 1 di atas, maka **nilai mahasiswa** yang melakukan kecurangan (menyontek maupun dicontek) akan di – **NOL** – kan.

*If the student is proved to the actions described in point 1 above, the score of the student which committed dishonest acts (cheating or being cheated) will be “Zero”*

1. Perhatikan jadwal pengumpulan jawaban, segala jenis pengumpulan jawaban di luar jadwal tidak dilayani.

*Pay attention to the submission schedule, all kinds of submission outside the schedule will not be accepted*

1. Bila Anda tidak membaca peraturan ini, maka Anda dianggap telah membaca dan menyetujuinya

*If you have missed to read these regulations, so you are considered to have read and agreed on it*

1. Persentase penilaiaan untuk matakuliah ini adalah sebagai berikut:

*Marking percentage for this subject is described as follows:*

|  |  |
| --- | --- |
| **Tugas Mandiri**  *Assignment* | **Proyek**  *Project* |
| 40% | 60% |

1. Software yang digunakan pada matakuliah ini adalah sebagai berikut:

*Software will be used in this subject are described as follows:*

|  |
| --- |
| **Software**  *Software* |
| Visual Studio Code  Python 3.7  SciPy 1.5.0  OpenCV 3.4.2.16 |

## Ekstensi file yang harus disertakan dalam pengumpulan tugas mandiri dan proyek untuk matakuliah ini adalah sebagai berikut:

*File extensions should be included in assignment and project collection for this subject are described as follows:*

|  |  |
| --- | --- |
| **Tugas Mandiri**  *Assignment* | **Proyek**  *Project* |
| PY | PY |

## Soal

*Case*

**Spot the World**

Meet **Mr. Lion** who loves to travel the world and capture **world monuments** that he finds interesting in his photo album. One day, a friend came and **gave a picture to Mr. Lion** and asked **if Mr. Lion had been to the place in the photo**. Because there are so many places he had visited, Mr. Lion could not remember all the monuments. As an Artificial Intelligence Expert you are asked to **create a program** that helps Mr. Lion **match the photo given by his friend with his photo album**.

**Dataset Description**

The dataset consists of:

* **Monument.jpg**

Picture of the **monument to be found** (**Mr. Lion’s Friend’s Photo**).

* **Data Folder**

Pictures of **all** **monuments that Mr.Lion’s has visited.**

**Preprocessing**

Before being processed, **pictures** from the **Data folder** must be preprocessed using **Gaussian Blur**.

**Feature Matching**

The **target to be found** will be **matched** with **pictures** from the **Data folder**. All **matching results** will be **compared**, and the **best result** will be **shown**.

A picture containing text, indoor

Description automatically generated

**Figure 1. The best result of feature matching**

**References:**

* https://img.jakpost.net/c/2017/02/10/2017\_02\_10\_21340\_1486708892.\_large.jpg
* https://cdn.techexplorist.com/wp-content/uploads/2018/11/leaning-tower-of-pisa.jpg
* https://www.sejarahone.id/wp-content/uploads/2020/11/colosseum.jpg
* https://media.suara.com/pictures/970x544/2018/09/05/67129-patung-liberty.jpg
* https://i1.wp.com/www.tokyostreetview.com/wp-content/uploads/2019/05/Shirahige.jpg?fit=1280%2C720&ssl=1
* https://i.pinimg.com/originals/92/d2/07/92d207323de35da8521d52e684f1ea44.jpg
* https://www.pettitts.co.uk/images/Blog/17\_incredible\_landmarks\_in\_indonesia\_you\_dont\_want\_to\_miss/shutterstock/prambanan\_temple\_java.jpg
* https://i1.wp.com/the-travelling-twins.com/wp-content/uploads/2021/02/greece-landmarks-thetravellingtwins-7.jpg
* https://www.gap360.com/tpl/lib/img/public/compressed-images/tpl/lib/img/private/media/797\_yeo-khee-793472-unsplash-1480x1004-85.jpg
* https://www.worldatlas.com/r/w1200/upload/32/fb/8f/shutterstock-511451053.jpg
* https://youimg1.tripcdn.com/target/100w1f000001gw9soC849.jpg?proc=source%2Ftrip