Workshop #2: **Motion models- image stitching**

**Learning Outcomes:**

Upon successful completion of this workshop, you will have demonstrated the abilities to:

* Understand the knowledge of Motion models, image stitching.
* Write a demo program for image stitching: Whiteboard and document scanning problem.

**Requirements:**

Image stitching is the process of combining multiple photographic images with overlapping fields of view to produce a segmented panorama or high-resolution image. Image stitching is a widely used technique for recovering original data from ripped data. Image stitching is used in forensic and investigative science for the reconstruction of torn paper which is a big problem. In image mapping, stitching of images is done to do the complete mapping of a particular place. In this exercise, students are asked to write a simple image processing program that has the following basic function: image stitching to solve the ưhiteboard and document scanning problem. Details of the functions are described below:

**Function**: Whiteboard and document scanning: The most obvious application is used in scanning large documents - beyond the size of the scanner. We simply use multiple scanners, scan parts of the document, and then stitching them together. Note that the component images must overlap with amount enough so as not to miss any feature of the other large document. You are required to write an application for image stitching. Algorithms and models are chosen by students.

Evaluation Criteria

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| --- | --- | --- | --- | --- |
| No | Criteria | Requires | Mark | Note |
| 1 | Write a program with graphics interface | Create an application with an interface to perform mouse actions. | 2 | Executed in the background when the program is running. |
| 2 | Function: Image stitching | Write a program for image stitching to solve the Whiteboard and document scanning problem | 8 | Using mouse or keyboard |
| 3 | Total |  | 10 |  |