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Division : A

CV- Experiment 5

(Q1)

Ans1) The SIFT algorithm is invariant to scale because it uses scale space extrema detection. It identifies key points at multiple scales by convolving the image with Gaussian filters of varying sizes. This enables SIFT to detect features regardless of their scale.

(Q2)

Ans2) Another algorithm for key point descriptors is the SURF algorithm. SURF is similar to SIFT but uses a different approach for detecting keypoints and computing descriptors.

(Q3)

Ans3) Image alignment finds application in medical imaging, remote sensing and computer vision. One detailed application is in medical image registration for aligning pre-operative and intra-operative images during surgery.

(Q4)

Ans 4) An example of a matching algorithm is the Nearest Neighbour algorithm. In image processing, NN matching involves finding the closest matching between key points in two images based on certain similarity metrics such as Euclidean distance or cosine similarity.



T.Y. B.Tech. (ECE) Academic Year 2023-24 Semester: VI
Continuous Assessment Rubric

COURSE: Computer Vision (ECE4026B)
STUDENT:

EXPT NO.:

EVALUATOR: J. A. Lele

DATE:

DIMENSION	SCALE					SCORE (25)
	1	2	3	4	5	
Regularity and punctuality	Submitted without performance	Performed late and submitted later than scheduled date with permission	Performed on schedule; submitted two weeks late	Performed on schedule; submitted one week late	Performed and submitted as per schedule	5
Overall Understanding of experiment	Neither shows any understanding of the experiment nor can relate it to theory.	Objectives are not clear.	Can only state the objective but shows poor understanding	Understands objective but cannot place it in context of a theory topic	Understands objective and can relate it to an appropriate theory topic	6
Understanding the Procedure	Cannot follow the procedure	Follows the procedure half heartedly	Follows right procedure but cannot analyze data	Follows right procedure but can analyze data and interpret it without justification	Follows right procedure, can analyze data and interpret it with justification	5
Experiment Skills	Does not participate in experiment	Performs the experiment only with the help from supervisor/others and is confused.	Performs the experiment with some supervisory help but not keeping record.	Performs experiment on own without supervisory help, keeping record partially	Performs experiment on his/her own without supervisory help; records all readings properly. Keeps the setup clean.	5
Ethics	Copies the results from others	Completes the result analysis with help from others but forgets to acknowledge the help.	Completes the result analysis with help from others and acknowledges the help.	Produces his own result analysis but tries to manipulate	Produces his own result analysis faithfully and owns up the results without any manipulation	5

Total

24

Student's signature with date:

Teacher's signature with date:

Ward
13/3/24