

A GESTURE-BASED TOOL FOR STERILE BROWSING OF RADIOLOGY IMAGES

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OBJECTIVES

- To prepare dataset to detect and classify hand sign.
- To propose an algorithm for tracking the hand movements , detect the sign and classify.
- To implement the proposed algorithm using python libraries.
- To analyze the results.

LITERATURE REVIEW

S.No	REFERENCE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	FINDINGS
1	Simej G. Wysoski, Marcus V. Lamar, Susumu Kuroyanagi, Akira Iwata, (2002).	Requires new modalities that support medical imaging manipulation while allowing doctors' hands to remain sterile, supporting their focus of attention, and providing fast response times.	Artificial intelligence, Tracking algorithm	Artificial Intelligence	If the prediction is 0 - then images is converted into rectangle
2	Mokhar M. Hasan, Pramod K. Mishra, (2012). "Robust Gesture Recognition Using Gaussian Distribution"	Data from two usability tests provide insights and implications regarding human-computer interaction based on nonverbal conversational modalities.	Deep learning , Artificial intelligence	Artificial Intelligence, Machine learning.	1 - image is Resized into (200,200), 2 - image is rotated by -45.

LITERATURE REVIEW

S.NO	REFERENCE	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	FINDINGS
3	E. Stergiopoulou, N. Papamarkos. (2009). "Hand gesture recognition using a neural network shape fitting technique,"vol. 22(8), pp. 1141-1158, doi: 10.1016/j.engappai.2009.03.008.	In this project we have used Convolutional Neural Network to first train the model on the images of different hand gestures, like showing numbers with fingers as 0,1,2,3,4,5.	Machine learning, Artificial intelligence	Gaussian distribution	Image is Resized into (400,400) , image is converted into grayscale.
4	G. R. S. Murthy, R. S. Jadon. (2009). "A Review of Vision Based Hand Gestures Recognition," International Journal of Information Technology and Knowledge Management, vol.2(2), pp. 405-410.	AI Rock Paper Scissor with hand gesture is an AI based python project in which you can detect hand and fingers and with the help of your fingers co-ordinates you can figure out if it.	Gibson browsing, Artificial intelligence	Artificial Intelligence	Identifies the object and gestures.

LITERATURE REVIEW

S.No	REFERENCES	PROPOSED WORK	TOOLS USED/ ALGORITHM	TECHNOLOGY	FINDINGS
5	Joseph J. LaViola Jr., (1999). “A Survey of Hand Posture and Gesture Recognition Techniques and Technology”.	The gesture captured in the video frame is compared with the Pre-trained model and the gesture is identified.	Tracking Algorithm	Artificial Intelligence/ Computer vision technology	Detection and tracking algorithm of moving object in image based.

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- Mokhar M. Hasan, Pramod K. Mishra, (2012). “Robust Gesture Recognition Using Gaussian Distribution for Features Fitting” International Journal of Machine Learning and Computing, Vol. 2(3)
- Simei G. Wysoski, Marcus V. Lamar, Susumu Kuroyanagi, Akira Iwata, (2002). "A Rotation Invariant Approach On Static Gesture Recognition Using Boundary Histograms And Neural International Journal of Artificial Intelligence & Applications (IJAlA), Vol.3, No.4, July 2012.
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THANK YOU