

Real-time Communication System powered by AI for Specially abled

Literature Survey

S. No	Paper	Work	Tools or Algorithms	Findings
1	E. Stergiopoulou, N. Papamarkos, “Hand gesture recognition using a neural network shape fitting technique”	Hand Gesture fitting procedure via SelfGrowing and Self-Organized Neural Gas	Neural Network	The region of the hand is detected by applying a color segmentation technique based on a skin color filtering procedure in the YCbCr color space. Then, the SGONG network is applied on the hand area so as to approach its shape. Based on the output grid of neurons produced by the neural network, palm morphologic characteristics are extracted.
2	Gongfa Li, Heng Tang, “Hand gesture recognition based on convolution neural network”	The convolution neural network is applied to the recognition of gestures	Convolutional Neural Network	Geometric features based on the recognition method, the use of gestures of the edge characteristics and gestures of the regional structure characteristics as a recognition feature
3	G.R.S. Murthy, R.S. Jadon, “Hand gesture recognition using neural networks”	Supervised feedforward neural net training and back propagation algorithm for classifying hand gestures	Image Acquisition Toolbox of MATLAB	Analyzing and classifying hand gestures for HCI include Glove based techniques and Vision based techniques
4	Hsien-I Lin, Ming-Hsiang Hsu, and Wei-Kai Chen “Hand gesture recognition using neural networks”	The skin model and the calibration of hand position and orientation are applied to obtain the training and testing data for the CNN	Convolutional Neural Network, Gaussian Mixture Model	Since the light condition seriously affects the skin color. a Gaussian Mixture model (GMM) is used to train the skin model which is used to robustly filter out non-skin colors of an image
5	Pavlo Molchanov, Shalini Gupta, Kihwan Kim, Jan Kautz, “Hand Gesture Recognition With 3D Convolutional Neural Networks”	An algorithm for drivers' hand gesture recognition from challenging depth and intensity data using 3D convolutional neural networks	3D Convolutional Neural Network	Combines information from multiple spatial scales for the final prediction. Also, employs spatio-temporal data augmentation for more effective training and to reduce potential overfitting