GUJARAT TECHNOLOGICAL UNIVERSITY

(GTU)

INNOVATION COUNCIL (GIC)

Patent Search & Analysis Report (PSAR)

Date of Submission :

Dear **DAVE SANKET GOPALBHAI,**

Studied Patent Number for generation of PSAR :

PART 1: PATENT SEARCH DATABASE USED

1. Patent Search Database used	:	Google Patents
Web link of database	:	https://patents.google.com/
2. Keywords Used for Search	:	Human, activity, recognition
3. Search String Used	:	
4. Number of Results/Hits getting	:	9999

PART 2: BASIC DATA OF PATENTED INVENTION /BIBLIOGRAPHIC DATA

5. Category/ Field of Invention	:	USPC.....382/159,253,224,228
6. Invention is Related to/Class of Invention	:	Continuation of application No. 1 1/412.252
6 (a) : IPC class of the studied patent	:	G06K 9/00315
7. Title of Invention	:	Human Activity and Facial Expression Modeling and Recognition
8. Patent No.	:	
9. Application Number	:	14/307,342
9 (a) : Web link of the studied patent	:	https://patentimages.storage.googleapis.com/7c/80/75/6ec8dc536 64afa/US9489568.pdf
10. Date of Filing/Application (DD/MM/YYYY)	:	June 17/2014
11. Priority Date (DD/MM/YYYY)	:	
12. Publication/Journal Number	:	
13. Publication Date (DD/MM/YYYY)	:	
14. First Filled Country :	:	USA

15. Also Published as

Sr.No	Country Where Filled	Application No./Patent No.
1		

16. Inventor/s Details.

Sr.No	Name of Inventor	Address/City/Country of Inventor
1	Hyun-Soo Kim	Gyeonggi-do (KR)
2	Jong-Chang Lee	Gyeonggi-do (KR)

17. Applicant/Assignee Details.

Sr.No	Name of Applicant/Assignee	Address/City/Country of Applicant
1	Samsung Electronics Co.,Ltd.	Gyeonggi-do (KR)

18. Applicant for Patent is : Company

PART 3: TECHNICAL PART OF PATENTED INVENTION

19. Limitation of Prior Technology / Art

Poor image quality limits image segmentation's effectiveness.

20. Specific Problem Solved / Objective of Invention

Human activity and facial expression modeling and recognition are based on feature extraction techniques from time sequential images.

21. Brief about Invention

An apparatus and method for human activity and facial expression modeling and recognition are based on feature extraction techniques from time sequential images. The human activity modeling includes determining principal components of depth and/or binary shape images of human activities extracted from video clips. Independent Compo nent Analysis (ICA) representations are determined based on the principal components. Features are determined through Linear Discriminant Analysis (LDA) based on the ICA representations. A codebook is determined using vector quantization, Observation symbol sequences in the video clips am determined. And human activities are learned using the Hidden Markov Model (HMM) based on status transi tion and an observation matrix.

22. Key learning Points

Recognizing various human and creature motion gaits and behaviors is presented.

23. Summary of Invention

One method for having a computer represent its results for determining the foreground of an image is to direct the computer to segment out the foreground from an image. With the advancement and cost effectiveness of digital photography, many more digital images are being created than ever before. Many of these newly created digital images are taken of a person or people, whereby the person or people are arguably in the foreground of the image. Person or people segmentation from an entire image is currently a popular research topic in the field of computer vision. Most of the segmentation approaches rely heavily on training sets and accuracy of probabilistic models. Such approaches have the drawback of being computational and memory intensive. They are also sensitive to model mismatch since they are based on heavy assumptions.

24. Number of Claims : 20

25. Patent Status : Expired Patent

26. How much this invention is related with your IDP/UDP?

71 to 90%

27. Do you have any idea to do anything around the said invention to improve it? (Give short note in not more than 500 words)

The light that is focused on the image can be improved so that we can get the accurate result of the image.