HAND REGION EXTRACTION BY SALIENCY BASED COLOR COMPONENT ANALYSIS

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Abstract:

- ➔ This paper’s objective is to propose saliency-based color model algorithm for hand segmentation under constrained and non-constrained environments.

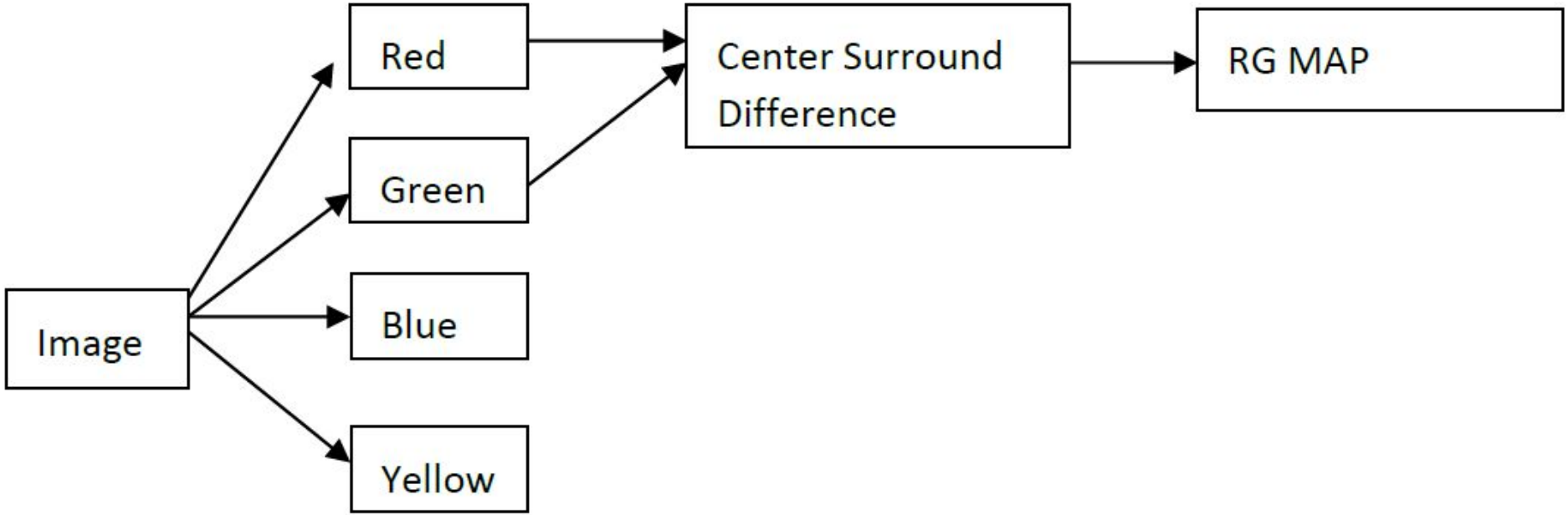
- ➔ The objective of this paper is to excel in the region of skin color detection for human-like interaction between the end user and the computer.

- ➔ IndexTerms:color,map,salient,feature ,intensity,saturation

Color Models For Hand Segmentation:

- HSV Model:
- RGB Model:
- YCbCr Model:
- HSI Model:
- CMYK Model

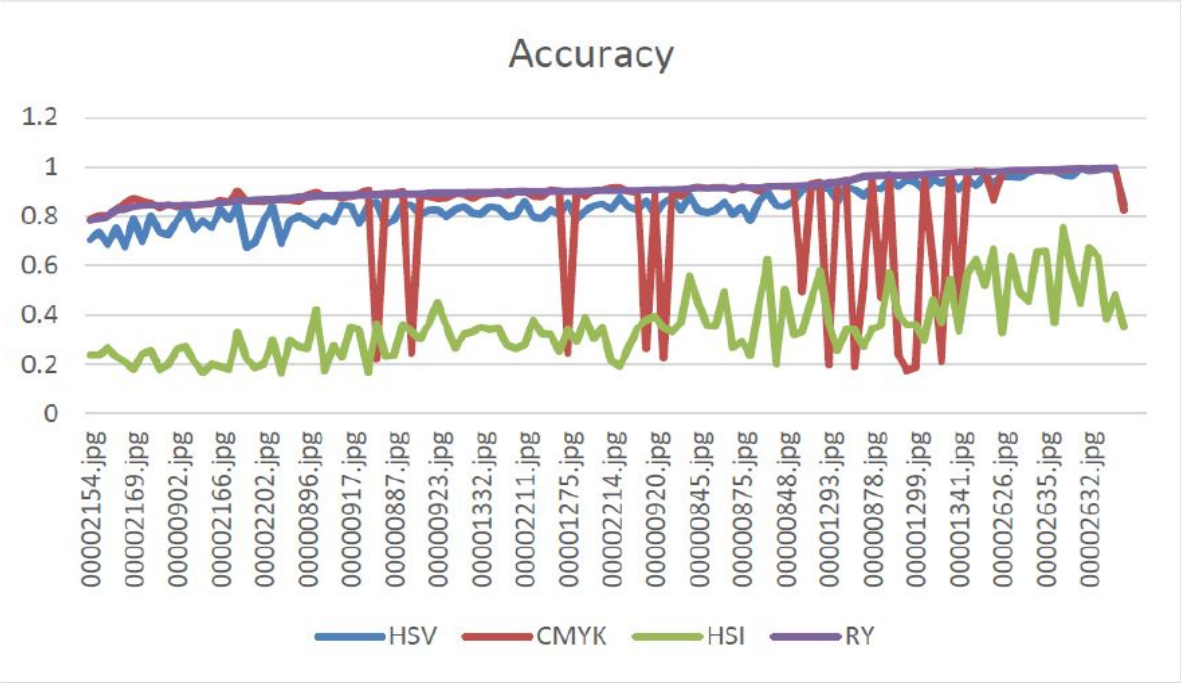
Saliency Model:



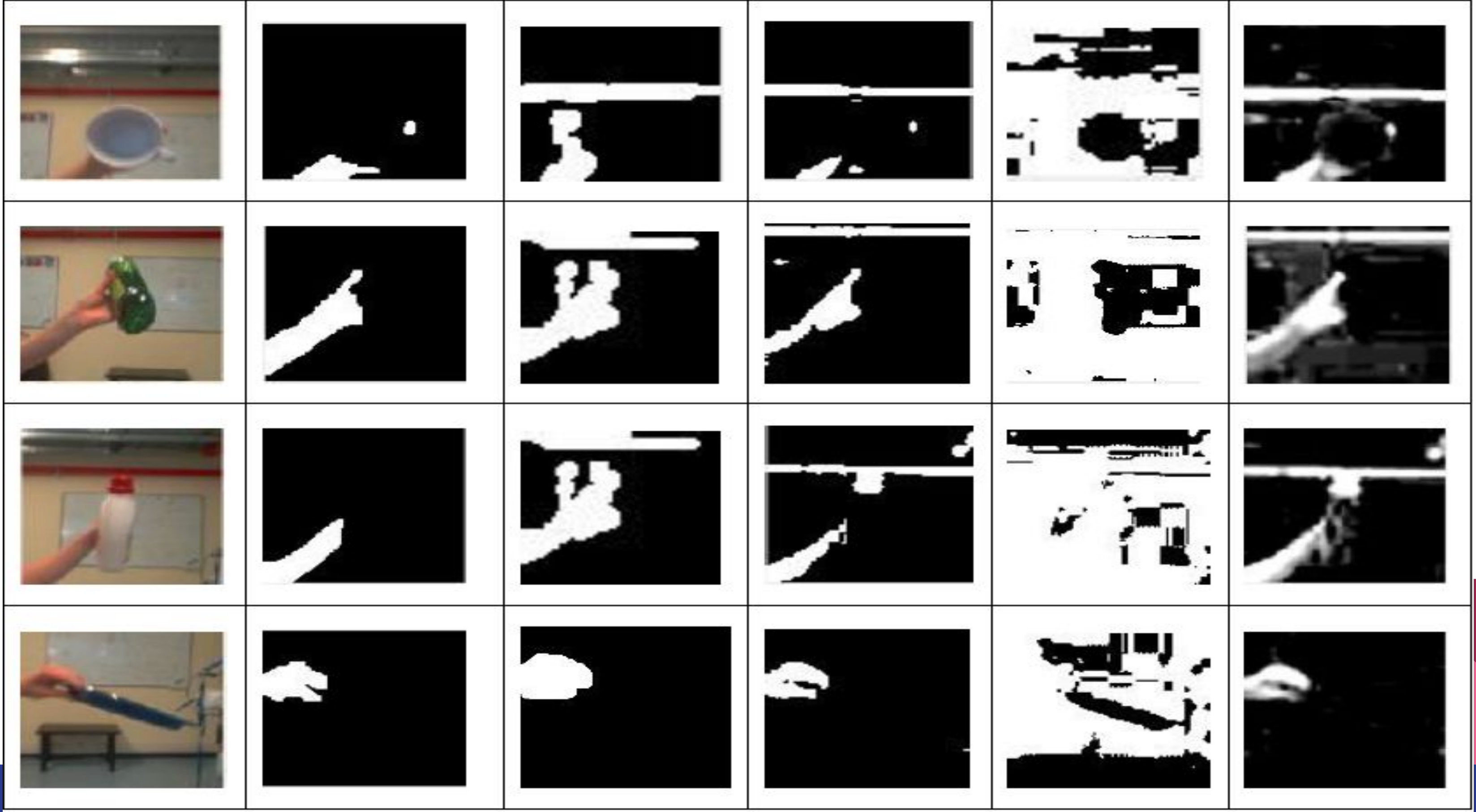
Comparison between hand and object

Representative Image				

Accuracy:


Accuracy
1.2
1
0.8
0.6
0.4
0.2
0
00002154.jpg
00002169.jpg
00000902.jpg
00002166.jpg
00002202.jpg
00000896.jpg
00000917.jpg
00000887.jpg
00000923.jpg
00001332.jpg
00002211.jpg
00001275.jpg
00002214.jpg
00000920.jpg
00000845.jpg
00000875.jpg
00000848.jpg
00001293.jpg
00000878.jpg
00001299.jpg
00001341.jpg
00002626.jpg
00002635.jpg
00002632.jpg
HSV
CMYK
HSI
RY

Original Image	Ground Truth Image	HSV	CMYK	HSI	Salient Model



Conclusion:

- We can conclude that RY additive salient model performs the best among the hand segmentation algorithms.
- All the objects irrespective of their color combination values are detected a non-hand area in this algorithm.
- It can also be inferred that HSV performs the second best.In order to choose the best algorithms,we can RY additive salient model followed by HSV algorithm.