

# TITLE: Finding Missing person using Face Detection on Android application

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## ABSTRACT

Now-a- days finding the missing person is very difficult task to find out by people or police department, lots of documentation and hard work is there also it takes the lot of time duration as well as there is no guaranty of appropriate result. This project Finding Missing Person using Face Detection on Android Application presents the solution for this problem, its a scheme that is use on android mobile for capturing images and upload that into application, getting result on basis of face detection. We are using SWF-SIFT algorithm for comparing two images, the system ensure that 70- 80 per result on basis of compared images. We are using four modules User, Police, Compliant holder, Admin for getting appropriate result. Admin continuously Update database and Delete unnecessary data. The proposed system helps to find out particular person in minimum time less and hard-work.

**Keyword:** - SIFT : Scale Invariant Feature Transform , SWF : Star-Styled Window Filter , HFR : Human Face Recognition, DoG : Difference of Gaussian

## 1. Techniques for face recognition

### 1.1 SWF-SIFT Approach for Infrared

Makers TAN Chunlin , WANG Hongqiao, PEI Deli Theier paper displays a star-styled window channel SIFT (SWF-SIFT) plan to enhance the infrared human face acknowledgment execution by sifting through inaccurate matches. Execution examinations between the SIFT and SWF-SIFT calculations[1] demonstrate the benefits of the SWF-SIFT calculation through tests utilizing a commonplace infrared human face database. A SWF-SIFT calculation was produced to take care of confusing issues experienced in infrared human face acknowledgment by sifting through confounded focuses created by the SIFT calculation with a star-window channel. Examination of the SWT-SIFT and SIFT calculation[2] demonstrates that the SWF-SIFT calculation can adequately channel SIFT's confounded focuses to enhance the acknowledgment execution.

### 1.2 Artificial Neural Network

This paper proposed a respectable face acknowledgment calculation which coordinates the main part examination; back spread neural system (BPNN) and discrete cosine change to enhance the execution of face acknowledgment. An entire face acknowledgment framework proposed depends on PCA and DCT blend highlight extraction utilizing Artificial Neural Network. Important Component Analysis (PCA)[1] can be utilized for highlight extraction and measurement decrease. In this paper, the worldwide elements extraction is finished utilizing PCA based Eigen confronts calculation technique and the recognition part is finished utilizing multi-layered nourish forward Artificial

Neural Networks with back spread process. The motivation behind this review was to research and actualize a manufactured neural system for face acknowledgment. The goal was to build up a manufactured neural system based component extractor or classifier that can be utilized for approved client check in a viable workplace utilizing PCA. In particular, a back engendering neural system calculation was executed .We have connected test picture for acknowledgment of face utilizing prepared neural network[2].

### 1.3 Gradient-Orientation-Based PCA Subspace

Makers Gheorghita Ghinea, Rajkumar Kannan, Suresh Kannaiyan the proposed approach utilizes inclination orientation[1] to handle these effects. The Schurz disintegration is utilized for grid deterioration and after that Schurvalues and Schurvectors are removed for sub space projection. We call this sub space projection of face components as Schurfaces, which is numerically steady and have the capacity of taking care of damaged lattices. The Hausdorff separation is utilized with the closest neighbor classifier to gauge the likeness between various appearances. Trials are led with Yale confront database and ORL confront database. The outcomes demonstrate that the proposed approach is exceedingly discriminant and accomplishes a promising precision for face acknowledgment than the cutting edge approaches. These framework demonstrated that the Schurfaces has the high discriminant control and reliably outflanked the standard face acknowledgment strategies.

### 1.4 Using SIFT

Makers Ladislav Lenca, Pavel Kr'ala, The framework is accessible for research purposes for nothing. It utilizes our already proposed SIFT based[1] Kepenekci approach for the face acknowledgment, since it beats various efficient confront acknowledgment approaches on three vast standard corpora (to be specific FERET, AR and LFW) the framework demonstrates that this calculation is beneficial in a preprocessing venture of our framework so as to make great quality face models and demonstrate that the framework propose two novel directed confidence measure methods[2] in view of a back class likelihood and a multi-layer perceptron to distinguish erroneously perceived appearances. we proposed a test completely programmed confront acknowledgment framework for the Czech News Agency. The framework is utilized for the marking of individuals in photos amid inclusion into the ~CTK database.

### 1.5 Using Hybrid Real Time Algorithm

Creators M. A. Abdou, M. H. Fathy in their paper builds up an ongoing face acknowledgment application show for advanced cells. This presented demonstrate utilizes a cross breed skin shading Eigen confront recognition technique and an intrigue point restriction for highlight coordinating. The paper is coded in JAVA programming dialect to satisfy Android advanced mobile phones. Results are appeared and contrasted and existing open source systems for confirmation. The point is to keep up continuous measures with high acknowledgment rate. Applications run from security to individuals with inabilities adjustment. the proposed half and half face recognition technique that utilizations both skin shading channel and Eigen faces[1] gives preferred outcomes over utilizing eigen confronts just (as created in the OpenCV)[2]. Acknowledgment framework that fits with Android advanced mobile phones utilizes intrigue focuses' identification for better elements coordinating. The framework demonstrates compelling discovery acknowledgment rate when contrasted and existing open source calculations in various DB sizes. Moreover, the execution time is adequate for ongoing applications.

### 1.6 HARRIS AND SIFT TRANSFORM

Creators Jingyu Yang, Song Wang, Xiaogang Du in their paper SIFT (Scale invariant element change) calculation to fathom the picture turn, scaling and different issues, yet for the geometry qualities clearer, wealthier surface data regarding the high-determination remote detecting pictures, the calculation expends more memory, speed of operation is moderate the issue is extremely noticeable. The blends of two proposed picture coordinating calculations depend on Harris corner [2] and SIFT descriptor. The test comes about demonstrate that, contrasted with the SIFT calculation, this calculation fundamentally cut calculation time, while protecting the rotational invariance of the SIFT descriptor and adjustment to light dim connection calculation can not defeat hindrance of completely programmed, in the high better determination remote detecting picture coordinating The trial comes about demonstrate that the strategy does not have the customary corner-based calculation dim coordinating the start to guarantee that the impact of high resolution remote detecting picture coordinating with pivot invariance[1]. In the interim, the technique extraordinarily diminishes the time required by the first SIFT calculation include point extraction and coordinating the removed edge little to encourage acknowledgment of the human eye may likewise be supplemented as SIFT spots.

### 1.7 EIGENFACE METHOD

Creators OKA Sudana, A. A. K., Darma Putra, I K. G., Alan Arismandika in their paper exhibited the face acknowledgment framework in android gadget utilizing eigenface [1]. The framework can be utilized as the base for the advancement of android applications, for example, android versatile security application and as a chronicle for the acknowledgment of human character. The trial of face acknowledgment framework in this paper utilizes 50 facial pictures as test pictures. Test pictures and preparing pictures are brought specifically with the camera in android gadget with a separation of face shooting is 60 cm. The test outcomes demonstrated that the framework delivers high precision with a win rate achieves 94.48% with FMR = 2.52% and FNMR = 3%. The test of the face acknowledgment framework got the high exactness result, with rejected precision around 97.48% and acknowledged precision rate around 97%. The exactness rate demonstrate that the framework we have made with the Eigenface technique was connected to the android stage delivers the high achievement rate [1].

### 2. CONCLUSIONS

In the survey, many techniques for recognition of face were suggested. In this review paper, an effort is made towards recognition of face and the obtained recognition accuracy is much. Different techniques like eigenface method, SIFT transform, Artificial Neural Network, SURF, PCA, PCASIFT etc. have been introduced. From all the above techniques in which research was carried out, it can be concluded that the SIFT shows better accuracy as compared to other methods.

### 3. REFERENCES

- [1] [1] Lowe D G. Object recognition from local scale-invariant features. In: Proc. of the International Conference on Computer Vision. Corfu, Greece, 1999
- [2] Ke Y, Sukthankar R. PCA-SIFT: A more distinctive representation for local image descriptors. In: Proc. of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition. Washington DC, USA, 2004.
- [3] Kisku D R, Tistarelli M, Sing J K, et al. Face recognition by fusion of local and global matching scores using DS theory: An evaluation with uni-classifier and multi-classifier paradigm. In: Proc. of IEEE Computer Vision and Pattern Recognition (CVPR) Workshop on Biometrics. Miami, USA, 2009.
- [4] Lowe D G. Distinctive image features from scale invariant keypoints. International Journal of Computer Vision, 2004