

# Personal Image and Video Organizer with Person-Based Navigation

## Smart-PIVO System

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**Abstract** — At present in many next generation software's biometric recognition has been included as a key facility. The Key advantage of using biometric recognition technologies over traditional approaches is the ability of gaining high accuracy in results. Face recognition can be considered as one of such popularly used technology. In this research it has been used to solve problems when organizing personal media galleries such as videos and images .Since the growth of digital cameras and camera integrated mobile phone usage, the amount of personal media files kept in databases are growing rapidly. Handling huge databases have been very tedious and time consuming task. The main purpose of the proposed system is handling those large media databases efficiently. It helps to categorize personnel images and videos intelligently in computers. Smart-PIVO application uses face detection and face recognition techniques to automate the process, which gives the advantage of accurate arrangement of data in large media datasets. This research paper presents the proposed solution along with prototype results.

**Keywords-component; face recognition; face detection; video summarising; person annotation**

### I. INTRODUCTION

“Hundreds of millions of digital photos are taken annually using digital cameras and most end up being loosely organized into folders on people’s hard drives.”[1]. Digital photography and video recording allows users to easily transmit their captures in to personal computers. Before you know there will be many photos and videos in your collection, without proper categorisation. According to author, managing and categorising images/videos manually can be very time consuming. Searching images or videos related to a one particular person can be a daunting task, since the user may have to go through a large set of images or videos. If you are searching a video clip that your friend in it you have to play and check all of your video clips. This will be definitely time wasting task. To resolve this problem author has come up with a solution. That searches your photos and video clips by people appeared in them and categorize accordingly.

Currently there is one desktop application called iPhoto developed by Apple developers and this application is basically targeted for Mac OS [2]. This iPhoto application has been developed to manage photos by face recognition techniques

and other features, like recognize photos by where, when it has taken and organize them accordingly [2]. However the Apple iPhoto does not provide the facility of recognizing videos in a person based manner whereas the authors proposed solution provides a person based recognition and categorization for both images and videos.

According to [3] in face recognition there are so many techniques such as face recognition using eigenfaces and face recognition using line edge map, neural network, Support vector machine (SVM) , Hough transform(HT) these are very popular methods currently used in applications. Out of the many methods that can be used for image processing the author has to do many research and prototyping in order to identify the most suitable face recognition methodology which can cater person identification in both videos and images.

This research would take a different perspective of managing personnel image and video collection. It will give users to track their personal images and videos by who’s in the pictures and videos. This system will use face recognition to track who are the people in them. Using this solution you can categorize all your friends’ photos and videos according to friend’s details and search them by their name. And Smart-PIVO will give users more attractive and user friendly UI to manage their images and videos

Aim of this research project is to develop and evaluate an efficient system for manage personal digital images and video clips by person based navigation, and make people life much easier by reducing time wastage in manual organizing.

### II. REVIEWING EXISTING WORK AND METHODOLOGIES

#### A. Reviewing research products

According to Choi et al. [4] personal photos commonly categorized and searched through conditions of who, where and when. Even though our approach is limited to ‘who’ it can supports video.

This research mainly focuses on accomplishing browsing issue with “Who”. To browse photos and videos by “who” it will need a face recognition mechanism. In the other hand latest digital cameras has the technology to embed geo coordination along with the taken date and time. Using those