Automatic Content Based Image Organization and Ranking on Mobile devices

Anup Mohan
ECE, Purdue University
mohan11@purdue.edu

Youngsol Koh
ECE, Purdue University
koh0@purdue.edu

Richa Agarwal
ECE, Purdue University
agarwa82@purdue.edu

February 23, 2015

Abstract

A number of mobile phone and tablet users have increased rapidly over the past decade. The mobile devices are equipped with high quality cameras for the purpose of taking images and videos. It is common to have thousands of images in a mobile device, and it is cumbersome to manually group the images based on its content and decide whether an image is of good qualtiy or not. Hence it is important to automatically organize and rank the images based on its content. In this paper we develop a mobile application to organize images based on, (i) the facial feature information of the users, (ii) computer generated images meme versus images taken from a camera. Our application will also rank images based on a no-reference blur metric and decide whether the image is of good quality or not. We evaluate the feasibility of executing the state of the art no-reference blur estimation methods on a mobile device in real time. We also evaluate the performance of the no-reference blur estimation methods on the state of the art image resolutions. We intend to develop a fast no-reference blur estimation method using integral images and by varying the image resolution for real time blur estimation on mobile devices.