Image and Video Analytics Project 1

1. Introduction

The first project of this course is about object detecting on a certain topic of interest from images. It is possible to do so without machine learning methods and the purpose of this project is to answer the question of “Can we apply the existing image analytics methods to provide an estimation on the amount of person that are present in a certain image?”. This report will serve as a documentation of this project which consist of introduction, data description and analytics, implementation, and conclusion.

1. Data Description and Analytics

The dataset being used for this project consist of 10 images of the Cala Vadella beach in Ibiza taken from a live web camera on the 9th of August throughout the day. The first image consists of an empty beach at 7 AM while the rest of the image is taken on the same day with the time being 9 AM, 10 AM, 11 AM, 12 PM, 1 PM, 2 PM, 3 PM, 5 PM, and 6 PM. The Images taken from 9 AM until 6 PM contain at least one person in the image. Each of the image containing people is annotated based on the position of the head and this data saved into a csv file consisting of the coordinate of each person’s head position including the image file name.

1. Implementation

The implementation part is divided into three parts these are removing the background, binarizing the image, and contour detection.

For the first part on removing the background, since most of the crowd resides only on the lower half of the image, region of interest can be defined. The empty beach image can be used for background removal, for

1. Conclusion

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