**Literature Review**

[**https://www.researchgate.net/publication/228943913\_Clustering\_visually\_similar\_images\_to\_improve\_image\_search\_engines**](https://www.researchgate.net/publication/228943913_Clustering_visually_similar_images_to_improve_image_search_engines)

At the moment Google image search is probably the only widely known way to search for similar images specifically based colour. To achieve enhancements for the user we propose to resize the images using a combination of methods. We use features invariant against translation and rotation to represent the image content and the average RGB cluster algorithms to present the images in groups in a more convenient way to the user.

Many words are ambiguous and searching for them results in very different types of images. And even for words with less ambiguity nearly always two groups of images are returned: One group of images which meet the requirements and one group of images not suitable. Here we present an approach to help the user reaching his search goals faster and more comfortably. This is done using image processing and image retrieval methods.

To test our approach, we created a database of Google image search results by querying Google image search, this yielded a database of 340 images from 17 different colour categories. . The results are visually promising, but at the moment it is not possible to present quantifiable results for this database, since we do not know which images belong to the same cluster. Also it can be seen that the similarity is mainly based on the color distribution of the images.

We presented a method to improve image-based searching for similar image in databases using method like cosine similarity model. The results are a good starting point, since the clusters contains mainly visually similar images. To give more precise results we plan to use other measures to compare cluster results, like Pearson similarity, Correlation distance, Chebyshev distance, Manhattan distance, and Euclidean distance. Using the proposed features in other applications like image retrieval and protecting copyright infringements we hope to gain further information on how to improve the results here.