# AGE AND GENDER RECOGNITION FROM HUMAN FACIAL IMAGES

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**A project report submitted in partial fulfilment of the requirements for the award of the degree of Bachelor of Computer Science (Honours)**

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**December 2016**

## ACKNOWLEDGEMENTS

We would like to thank everyone who had contributed to the successful completion of this project. We would like to express our gratitude to our research supervisor, Mr. M. Tariq Siddique for his invaluable advice, guidance and his enormous patience throughout the development of the research.

In addition, we would also like to express our gratitude to our loving parents and friends who had helped and given us encouragement.

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## ABSTRACT

Automatic human gender and age recognition has started catching the attention of researchers due to its possible wide application pool. To name a few it can be used in Human-Computer Interaction (HCI) systems to tune the context appropriately to suit the target person's gender and age, to monitor specific gender or age restricted areas in surveillance systems, to make targeted advertising where the relevant advertisement/information to the audience can be channelled from electronic billboard systems, in automated biometric data acquisition and for content based search in which identifying the gender and age reduces the search space significantly.

This project focuses on the area of face processing and aims at designing a reliable framework to facilitate face, gender, and gender group recognition. A framework has been optimized for the task of face cropping, gender, and age group recognition. It makes an extensive experiment with row pixel intensity valued features and Discrete Cosine Transform (DCT) coefficient features with Principal Component Analysis and k-Nearest Neighbour classification to identify the best recognition approach. The final results show approaches using DCT coefficient outperform their counter parts resulting in a 99% correct gender recognition rate and 68% correct age group recognition rate (considering four distinct age groups) in unseen test images. Detailed experimental settings and obtained results are clearly presented and explained in this report.

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