

Informatics Institute of Technology

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**Smart Colour Analyzer for colour matching in
Home Interior Designing**

A dissertation by

Pawan Gunaratne (2014258)

Supervised by

Mr. Pumudu Fernando

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Department of Computing

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ABSTRACT

Uses of proper colours is a crucial factor in any domain and it can influence human emotions, moods, behavior etc. When it comes to Interior Designing, Colour is one of the most important aspects of home designs. In the traditional colour matching process in home interior designing, takes considerable time and cost. As well both general public and domain experts have faced several difficulties when selecting a set of appropriate colors (Colour theme). Always it's better to have a prior knowledge about, how the set colors fit into a final home interior design. But it's quite challengeable to imagine the final outcome without having a lot of experience. Due to this problem, a solution is suggested with colour theme quality rating and color theme recommending mechanism along with colour theme distribution generation.

The proposed system uses a combined approach of machine learning methods with image analysis for generating colour theme distribution, colour theme quality rating and other colour theme recommendations. The system uses optimized clustering approach for the color theme distribution and uses SVM prediction model to rate the quality of colour themes. This overall approach will provide more customizability towards user requirements and enhanced prediction abilities to the system.

The Smart Colour Analyzer system was evaluated by both domain experts and the general public. Eventually, the test results attested that the overall process of the proposed system has been carried out in an effective and efficient way.

Key Words:

Interior Designing, Color Themes, Clustering, Support Vector Machine(SVM), Machine Learning, Image Analysis