# INFORMATICS INSTITUTE OF TECHNOLOGY
# In Collaboration with
# UNIVERSITY OF WESTMINSTER (UOW)

BEng/BEng.(Hons) in Software Engineering

Final year Project

## Costume Color Analyzer

A dissertation by

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# ABSTRACT

Selecting ideal colors for your costumes is a key point when it comes to photography. But it becomes quite difficult to select matching colors which go with the background. Sometimes we do search on web resources and get expert ideas on this. But it is time-consuming and costly as well. Due to these problems, Costume Color Analyzer is suggested as a quick solution. It comes up with color theme recommendation, color theme rating, and color theme generation. Basically, when an image of the background is uploaded into the system it recommends matching colors which will be suitable for users' costumes.

The system was mainly developed with machine learning technologies combined with image processing. As the core development, the author uses image clustering, image processing, image classifications, and image segmentation. The main programing language used for this is python. And for the interface development HTML and Flask is used.

The system has achieved an accuracy of 72% which is a good standard. Also, most of the evaluators admired the product as useful.

**Keywords:**

Image Processing, Image Clustering, Machine Learning, Support Vector Machine