

Fashion Products Classifier Using Visual Recognition

1. INTRODUCTION

1.1 OVERVIEW:

In this project you need to build a web application that checks the type of fashion product like Shirt, T-Shirt, and Jeans. IBM Watson Visual Recognition services is used to build a custom model to check for the type of product. Build the web application using Node-red Service and integrate to Visual Recognition. Now a day's fashion industries have various fashion styles and update time to time. In fashion products, obtaining a visual analysis of the overall production is a key aspect, both in developing marketing strategies and for helping fashion designers in the creative workflow of new products. As a first important step in order to proceed with a visual analysis, the various outcomes of the designers' work must be collected and categorized. This applies especially if there are many different designer teams which are employed with outsourcing contracts, and located all around the world, as it usually happens with large companies. In particular, in Adidas and other company, the designers' production comprises a consistent number of images which represent a very large variety of products, from clothing to footwear. Moreover, these works are usually independent from each other. Then, articles are of different types and come from different sources, but their characteristics must be analysed and classified as a whole by data experts and analysts. Hence, a significant step in visual analysis is recognizing, classifying, and extracting features directly from final images or 3D-renderings of products, collected before the actual fabrication of the clothing.

1.2 PURPOSE:

In fashion products, many feature extractions from final images of products requires different methods and techniques, depending on which feature to extract. Two main fields are usually investigated, namely, the image classification (or recognition), and the detection of objects in the image. In the following, a brief outline of the major contributions in image classification, object localization and detection is provided.

2. LITERATURE SURVEY

2.1 EXISTING PROBLEM:

The categorization of many products was, until now, manually performed by many teams, since it requires both domain expertise and a comprehensive knowledge over the range of products. Such a manual classification is an error-prone task that may cause incorrect results, misleading the subsequent visual analysis, and which also requires too much time. As a matter of fact, over the years, the number of produced articles has grown significantly, and, currently, many teams invent ~20 k different articles per season (twice a year). For all these products, about two dozen main attributes (or categories) were identified by data experts, such as the presence and position of logos or the three-stripes, which is the primary colour, the presence of prints or clothing patterns, and so on. Each of these categories takes values in a different domain, and ranges across a set of possible classes. As expected, manually performing the

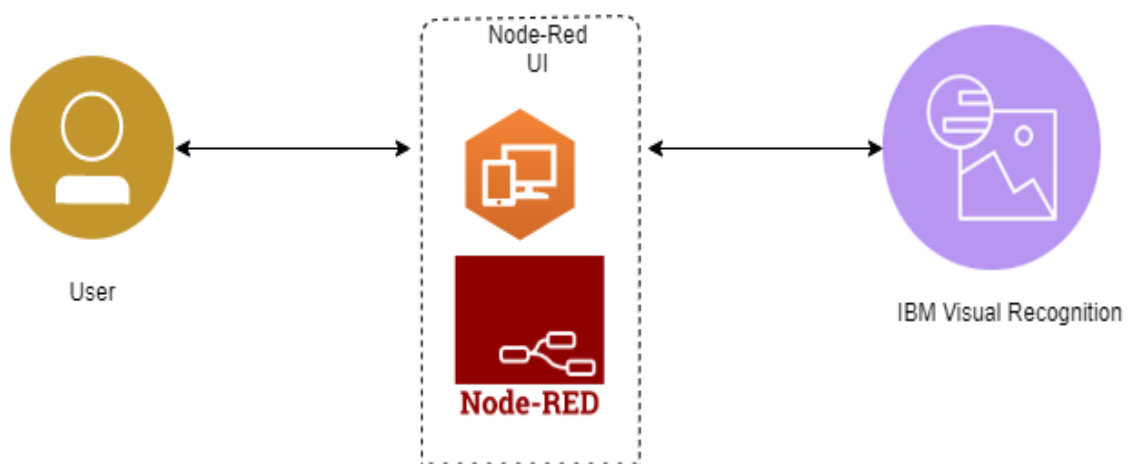
classification of attributes for each article has become an unfeasible task. Due to the large amount of data, and the diversity of the source of images, the task of classifying and recognizing features of clothing images is not only hard to perform manually, but, at the same time, it is also difficult to automate properly.

2.2 PROPOSED SOLUTION:

Visual recognition of commercial products is a branch of the wider fields of object detection and feature extraction in computer vision, and, in particular, it is an important step in the creative workflow in fashion products. Automatically classifying garment features makes both designers and data experts aware of their overall production, which is fundamental in order to organize marketing campaigns, avoid duplicates, categorize apparel products for e-commerce purposes, and so on. There are many different techniques for visual recognition, ranging from standard image processing to machine learning approaches: this work, made by using and testing the different approaches with help of IBM Watson Visual Recognition services is used to build a custom model to check for the type of product. Build the web application using Node-red Service and integrate to Visual Recognition.

3. THEORITICAL ANALYSIS

3.1 BLOCK DIAGRAM:

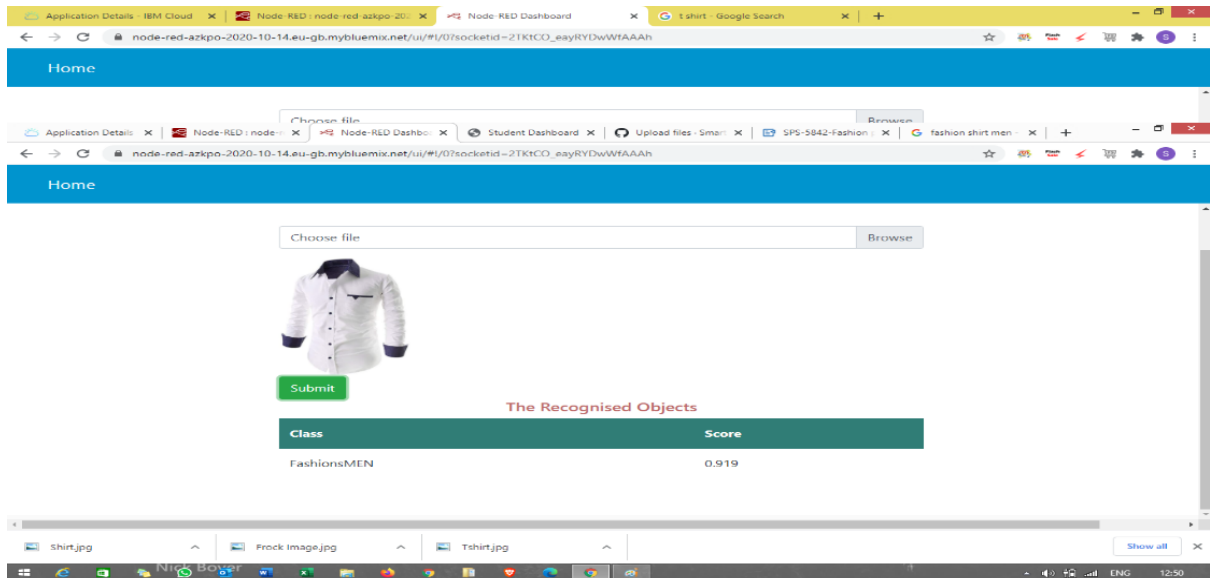


3.2 HARDWARE/SOFTWARE DESIGNING:

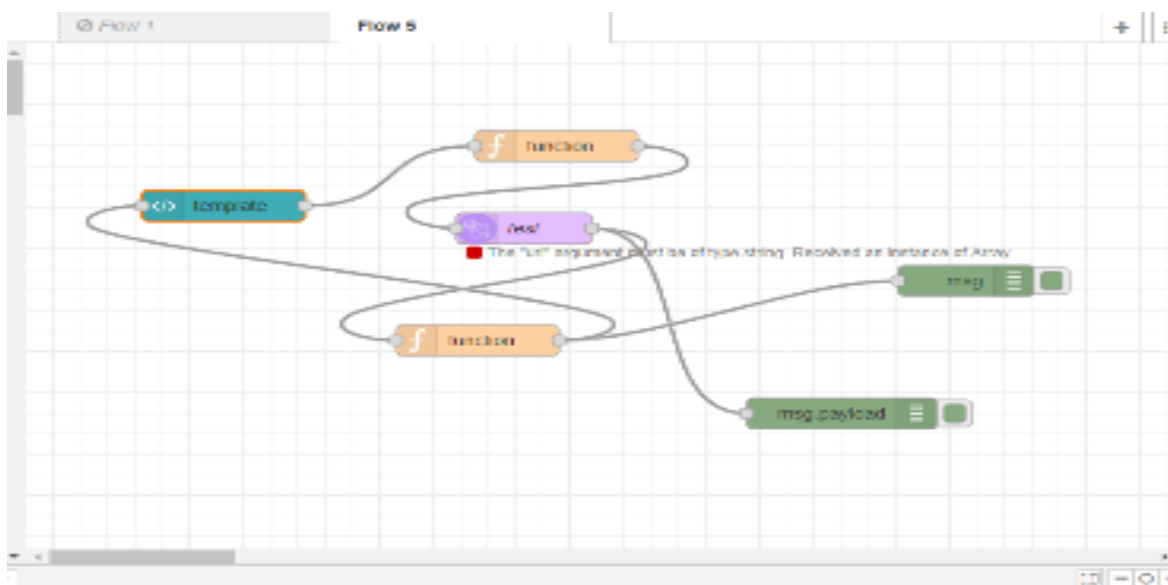
We used IBM cloud services and inbuilt datasets and following services use-

1. IBM Watson Visual Recognition.
2. Node-Red

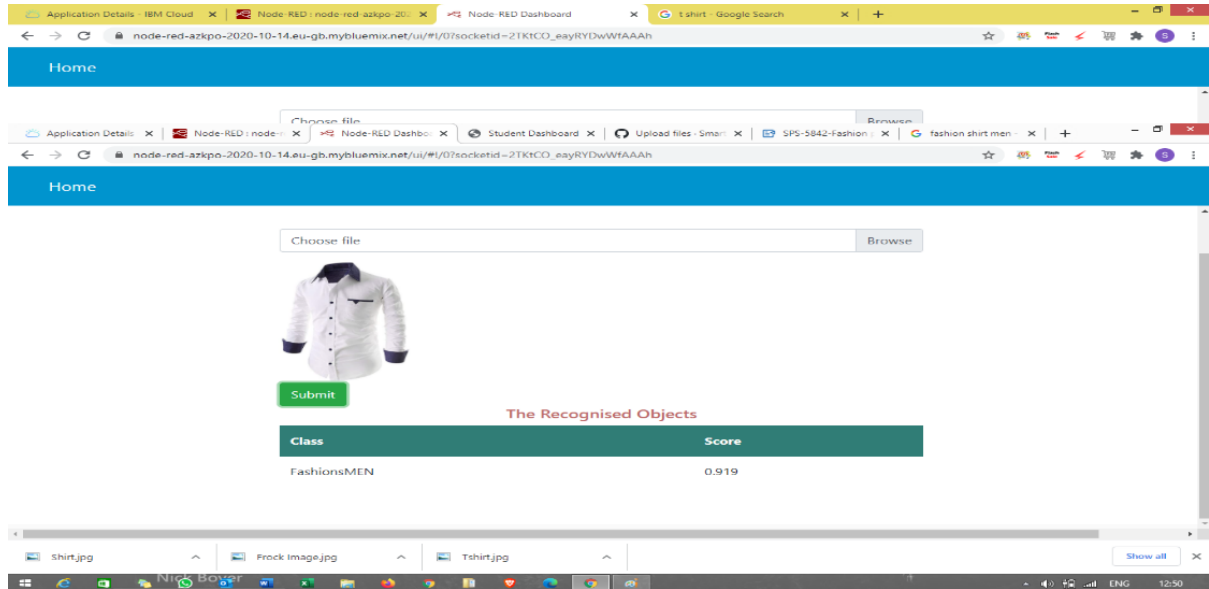
4. EXPERIMENTAL INVESTIGATION



5. FLOWCHART



6. RESULT



7. CONCLUSION

A web application that checks the type of fashion product like Shirt, T-Shirt, and Jeans. IBM Watson Visual Recognition services is used to build a custom model to check for the type of product. Build the web application using Node-red Service and integrate to Visual Recognition. It is reducing the error and manual effort.