

SMARTINTERNZ PROJECT

Name of the Contributor : Dr.SABITHA R

Project Title : Fashion Products Classification using Visual Recognition

Category: IBM Cloud Application

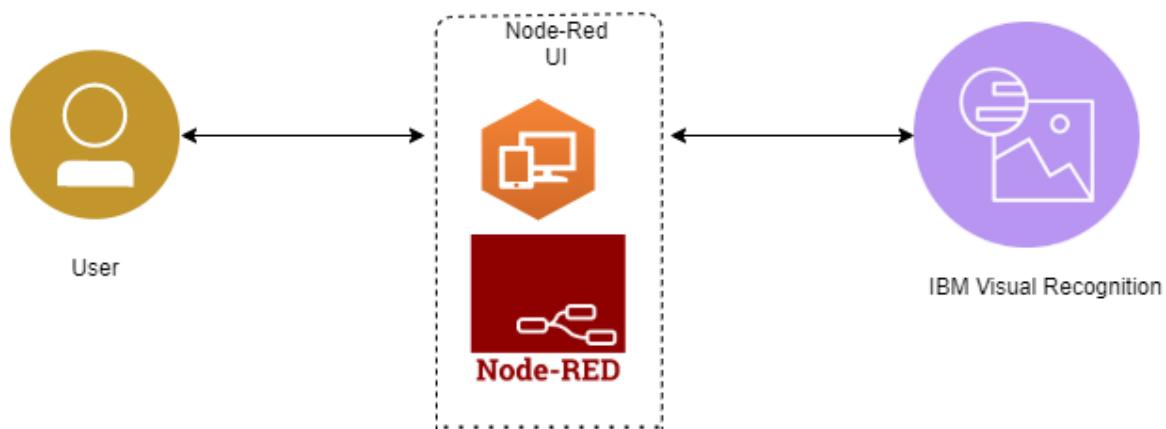
Overview :

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.

Services Used:

1. IBM Watson Visual Recognition
2. Node-Red

Archietecture:

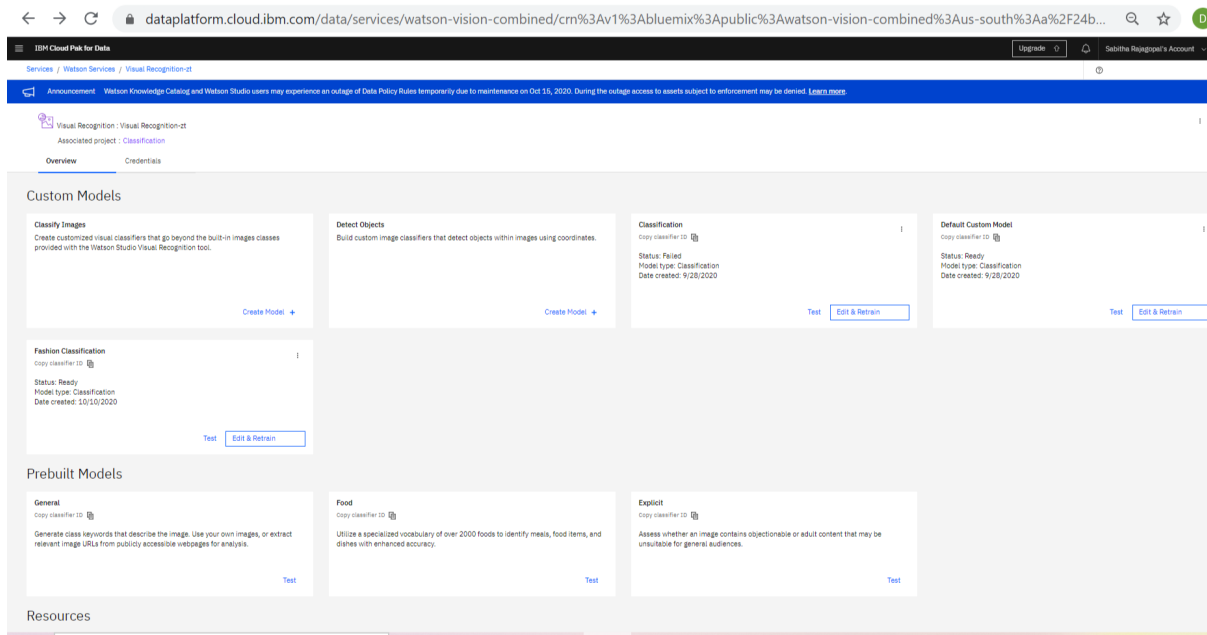


Task : 1. Building a Custom Model using Visual Recognition Service

Sub Task 1 : Login to IBM Account

Sub Task 2 : Create Visual Recognition Service

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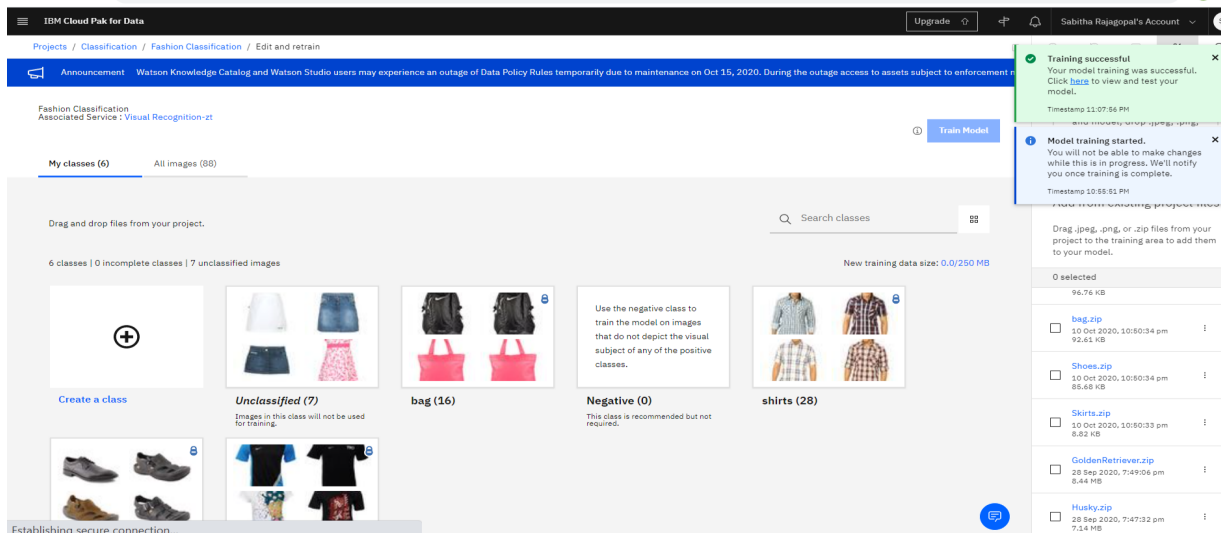


Sub Task 3 : Create Custom Model

Step 1 : Create the custom model for classification

Step 2: Load the Zip files of Images for training

Step 3: Train the classification Model



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The screenshot shows the IBM Cloud Pak for Data interface for a project named "Fashion Classification". The page has a navigation bar at the top with the IBM Cloud Pak for Data logo, a search bar, and a user profile. Below the navigation bar, there is a breadcrumb trail: "Projects / Classification / Fashion Classification". A blue banner at the top contains an announcement about a Watson Knowledge Catalog and Watson Studio outage. The main content area is titled "Fashion Classification" and includes a sub-header "Associated Service: Visual Recognition-rt". There are three tabs: "Overview", "Test", and "Implementation", with "Overview" being the active tab. The "Overview" tab displays a "Summary" section with a table of model details and a "Classes" section with a table of class examples.

Model ID	FashionClassification_975487416
Status	Ready
Explanation	This model is ready for use.
Created on	10/10/2020, 10:56:13 PM
Updated on	10/10/2020, 10:56:13 PM
Number of classes	4
Number of images	88

CLASS	NUMBER OF EXAMPLES
bag	16
shirts	28
Shoes	17
T-shirt	20

Step 4 : Test the model with new input image and test fro varying threshold values

The screenshot shows the IBM Cloud Pak for Data interface for the "Fashion Classification" project, specifically the "Test" tab. The page has a navigation bar at the top with the IBM Cloud Pak for Data logo, a search bar, and a user profile. Below the navigation bar, there is a breadcrumb trail: "Projects / Classification / Fashion Classification". A blue banner at the top contains an announcement about a Watson Knowledge Catalog and Watson Studio outage. The main content area is titled "Fashion Classification" and includes a sub-header "Associated Service: Visual Recognition-rt". There are three tabs: "Overview", "Test", and "Implementation", with "Test" being the active tab. The "Test" tab displays a "Filter" section on the left with a "Threshold" slider set to 0.21 and a "Classes" section with checkboxes for "bag", "shirts", "Shoes", and "T-shirt". The main area shows a "Clear results" button and a list of test results for a specific image. The results are displayed as a table with columns for the class name and the confidence score.

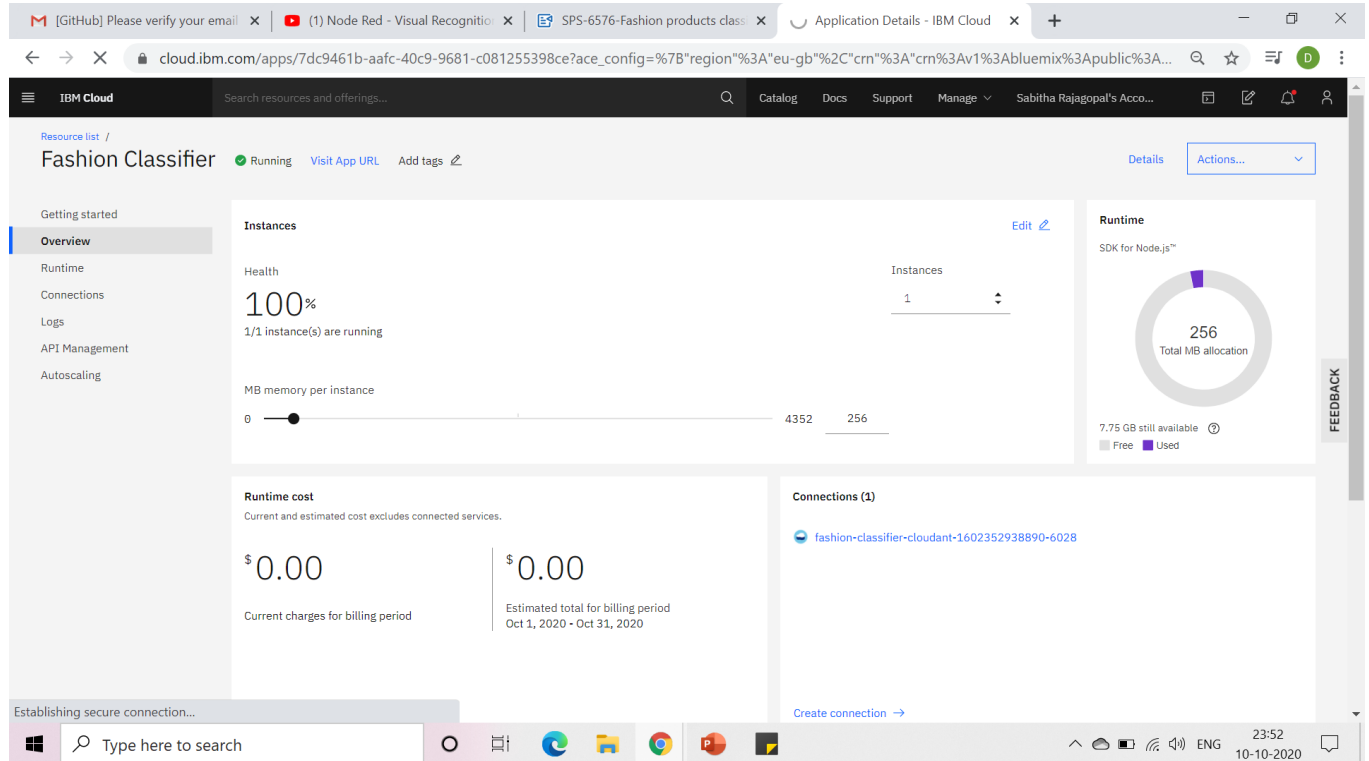
CLASS	CONFIDENCE
BAG	0.82
SHIRTS	0.20
SHOES	0.14
T-SHIRT	0.01

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Task : 2. Building Node-Red Application

Sub-task 1 : Create Node-Red Service

Step 1 : Catalog -- Node-Red -- Create App



Cloud Foundry Apps

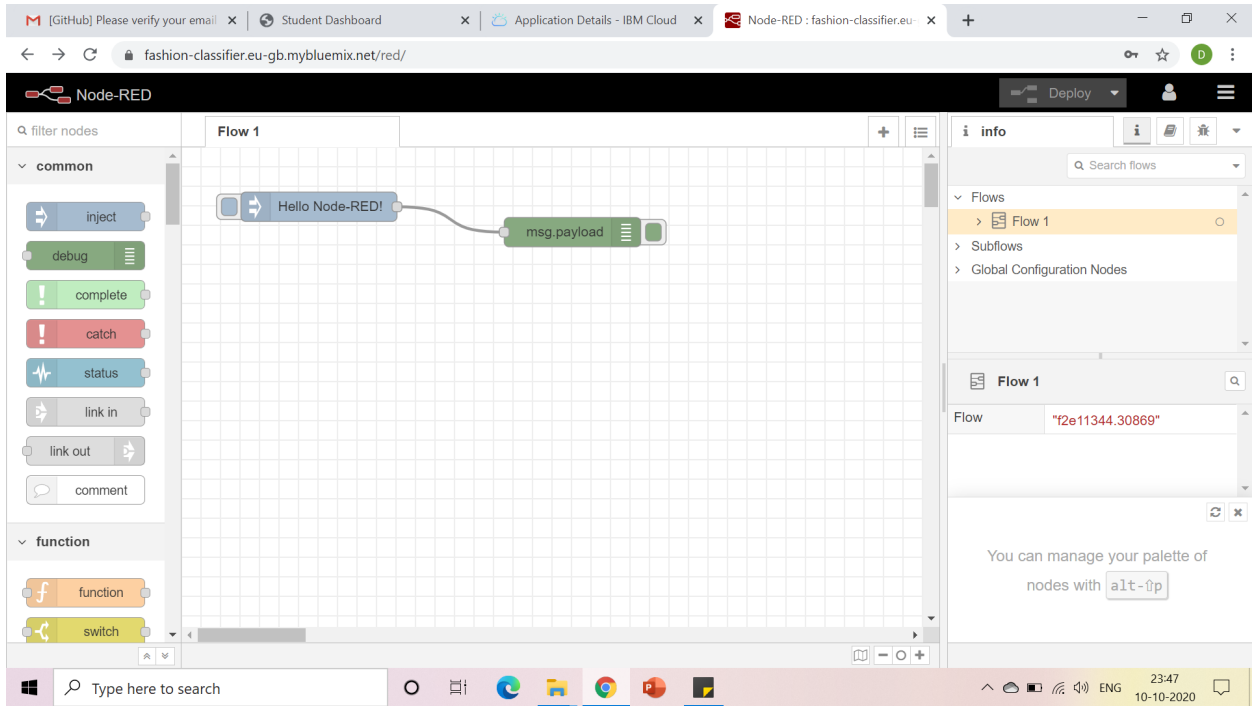
Sub-task 2 : Integrate Node Red To Visual Recognition

- Firstly configure the visual recognition by giving API key which you get from the visual recognition service once you have created it.
- Next, install the dashboard nodes from the manage palette and create UI accordingly by making use of form nodes and text nodes.

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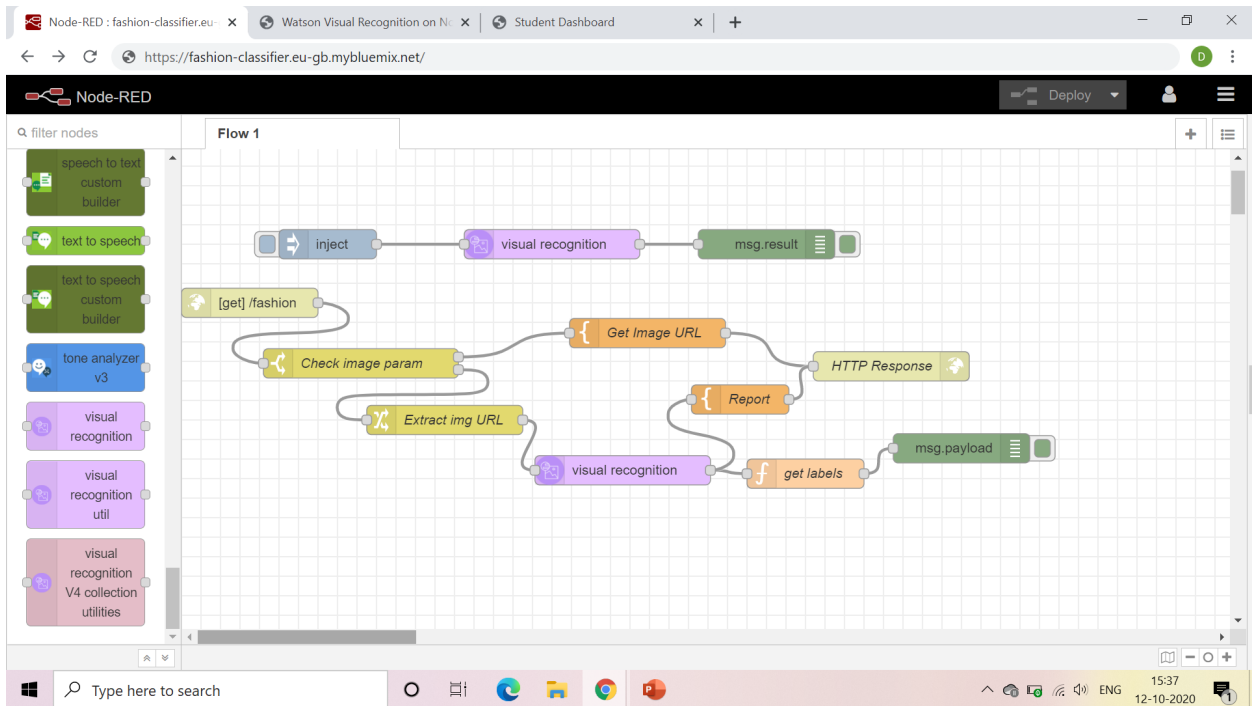
Node-RED interface showing a simple flow named "Flow 1". The flow consists of an "inject" node followed by a "Hello Node-RED!" message node, which is connected to a "msg.payload" output node.

The left sidebar shows the "common" and "function" node palettes. The right sidebar shows the "info" panel with details about the flow.



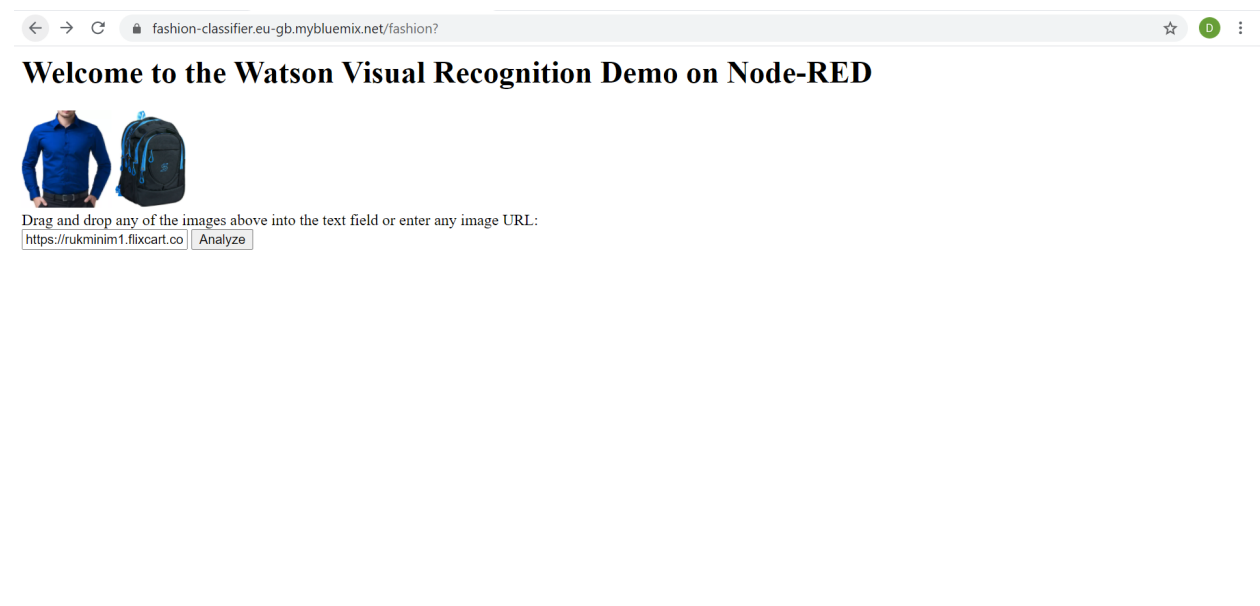
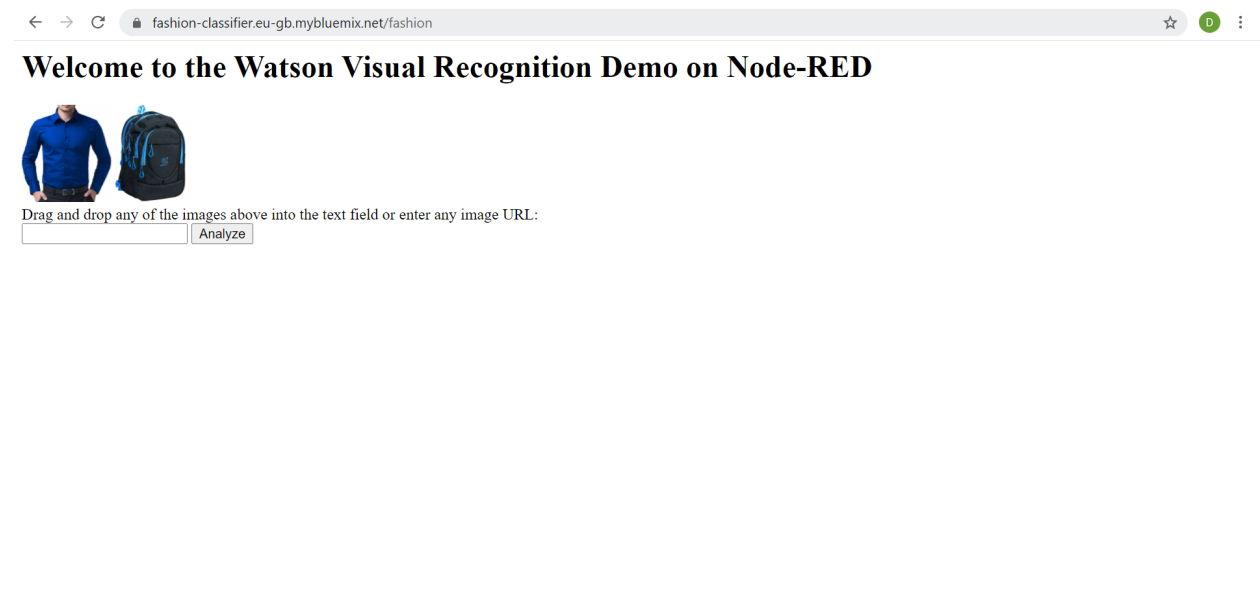
Node-RED interface showing a more complex flow named "Flow 1". The flow starts with an "inject" node, followed by a "visual recognition" node, and then a "msg.result" output node. A second path starts with a "[get] /fashion" node, followed by a "Check image param" node, which branches into two paths: one leading to a "Get Image URL" node and another to an "Extract img URL" node. The "Get Image URL" node leads to an "HTTP Response" node, which then leads to a "Report" node. The "Extract img URL" node leads to a "visual recognition" node, which then leads to a "get labels" node, and finally to a "msg.payload" output node.

The left sidebar shows the "common" and "function" node palettes. The right sidebar shows the "info" panel with details about the flow.



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UI CREATION



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Node-RED Watson Visual Recognition Output

Analyzed image: <https://rukminim1.flixcart.com/image/714/857/k65d18w0/shirt/p/4/t/48-bfrybluesht02ab-being-fab-original-imaecvnxndp3zbdn.jpeg?q=50>



Name	Score
sleeve	0.766
poplin (fabric)	0.538
fabric	0.538
long sleeve	0.538
mess jacket	0.5
coat	0.505
overgarment	0.509
garment	0.51
clothing	0.6
ultramarine color	0.933
steel blue color	0.729

Try again