



Retail Image Classifier

Image Classification

Training

Enter tags:

Submit

Prediction

Enter URL:

Predict

Image classification using the Azure Custom Vision Service

Image Classification is a process of distill information through Bing search API and then train them with the use of custom vision API and providing the relevant prediction for the trained model

Work Flow

Working of the image classifier



Input

User gives the tags name as a input



Bing Search API

It will search the images according to the input given



Custom Vision Training API

It will trained the images



Custom Vision Prediction API

Prediction on images will be formed



Probability Threshold

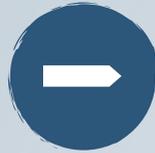
Result of the prediction will displayed

Building Process

How will this work?

Phase 1 Train

- To train the classifier, use the existing images to create a model that identifies the visual qualities of each tag
- The training process should complete in few minutes. During this process, information about the training images and the model details will be displayed in the **Performance** tab



Phase 2 Predict

- After you train the model, you will be able to test images programmatically by submitting them to a Prediction API
- Get an information about the Prediction API by clicking on the Prediction Tab. Which will display Prediction KEY(Secret key) and Prediction URL



Phase 3 Re-Train

- We can Improve the quality of a Custom Vision Service classifier by feeding the Training API based on the last prediction.
- The quality of your classifier depends on the amount, quality, and variety of the labeled data you provide it and how balanced the overall dataset is.
- The process of building such a classifier is iterative.

Performance

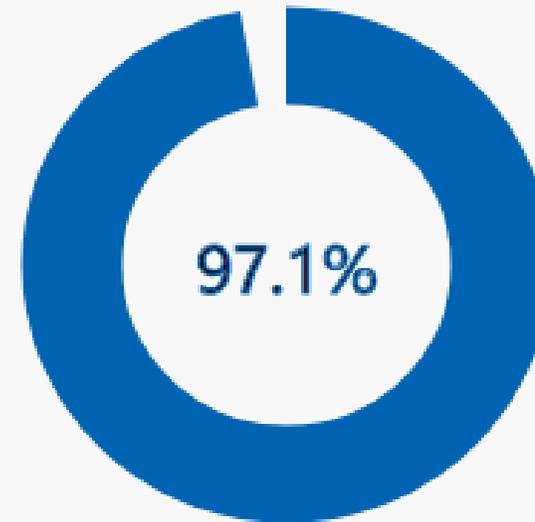
Probability Threshold

Precision ⓘ



This number will tell you: if a tag is predicted by your model, how likely is that to be right?

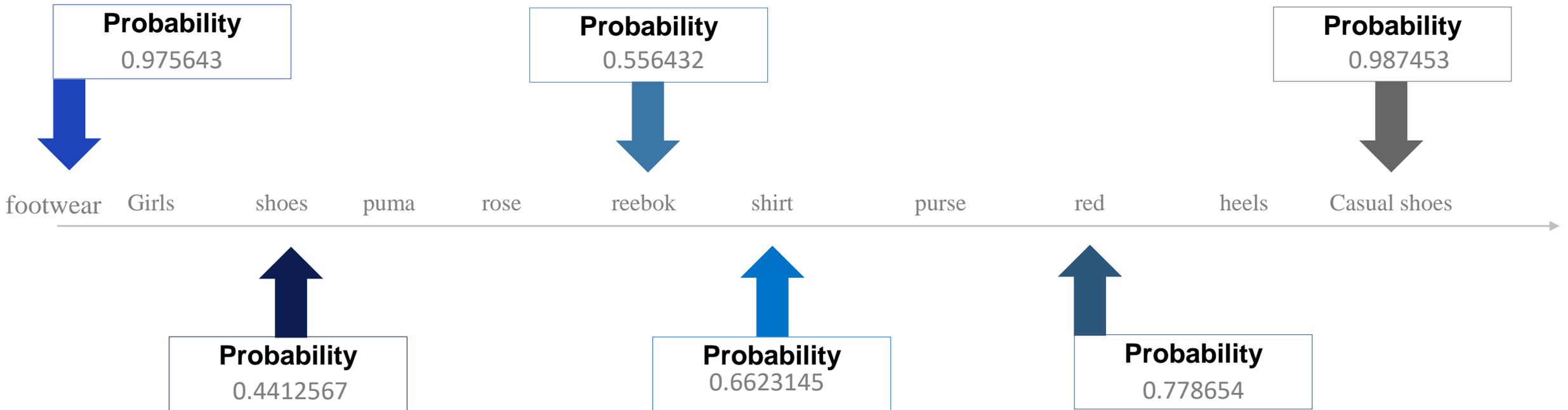
Recall ⓘ



This number will tell you: out of the tags which should be predicted correctly, what percentage did your model correctly find

Prediction Result

Prediction of the Retail product trained in the Custom Vision Model



Retail Image Classifier

- ❑ With online sales growth, 1 traditional retailers are increasing their investments in multichannel strategies and redoubling their efforts to meet online consumer demands
- ❑ One of the most effective ways to keep pace with the giants of e-commerce is developing a Retail image classifier it will enhance online product discovery, retailers must maintain and provide digital images and videos, catalog descriptions, category-specific metadata (e.g., nutrition information for food products), stock availability, product matrices (e.g., size ranges), company/brand logos, product ratings and reviews, pricing, etc.
- ❑ Acquiring the information from suppliers is a time-consuming task but with the help of image classifier this task can be resolved in a very short span of time. Image classifier will provide the whole information about that particular product

Can Be Used For

1 Medical/Health Image Classifier



Medical image classification is one of the most important problems in the image recognition area, and its aim is to classify medical images into different categories to help doctors in disease diagnosis or further research so with the help of Image classifier this problem can be resolved in a very efficient manner. It also helps in X-ray Image Classification.

2 Agriculture Image Classifier



As fields and farms grow bigger, better monitoring systems are needed for automated management and reduced expenses so Image classifier plays a very vital role here. By taking the picture of the crops it will tell all the features and functionality of the respective crop.

3 Vehicle Insurance Image Classifier



Image classifier is expected to affect the area of vehicle insurance policy. If any tragedy happens it will keep the records of insurance granted to an individual at that time. It may be used for Deciding premium for insurance based on the extent of damage

Market Analysis

The Global Image Recognition Market accounted for **\$15.91 billion in 2016** and is expected to reach **\$43.57 billion by 2022** growing at a **CAGR of 18.2%** from 2016 to 2022

This is due to the increase in demand for autonomous and semi-autonomous vehicles, drones (military and domestic purpose) wearables, and smartphones

Sectors:

- Retail & E-commerce
- Media & Entertainment
- BFSI
- Automobile & Transportation
- Telecom & IT
- Government
- Healthcare
- Others



THANK YOU