**IBM Cloud**

Using watson visual recognition

HANDS-ON LAB TO TRAIN A VISUAL

RECOGNITION MODEL AND IDENTIFY

IMAGES IN A CODE-FREE ENVIRONMENT

**Lab Guide**

Notices and Disclaimers

© Copyright IBM Corporation 2017.

The information contained in these materials is provided for informational purposes only, and is provided AS IS without warranty of any kind, express or implied. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, these materials. Nothing contained in these materials is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in these materials to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. This information is based on current IBM product plans and strategy, which are subject to change by IBM without notice. Product release dates and/or capabilities referenced in these materials may change at any time at IBM’s sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

IBM, the IBM logo and ibm.com are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both. If these and other IBM trademarked terms are marked on their first occurrence in this information with a trademark symbol (® or ™), these symbols indicate U.S. registered or common law trademarks owned by IBM at the time this information was published. Such trademarks may also be registered or common law trademarks in other countries. A current list of IBM trademarks is available on the Web at “Copyright and trademark information” at ibm.com/legal/copytrade.shtml

Other company, product and service names may be trademarks or service marks of others

**Table of Contents**

[Lab Environment Overview 4](#_Toc500419009)

[Module 1: FILL IN NAME 4](#_Toc500419010)

[Module 1: Lab Workflow Overview 4](#_Toc500419011)

[Module 1: Lab Instructions 4](#_Toc500419012)

[Module 1: Lab Summary 4](#_Toc500419013)

[Module 2: FILL IN NAME 4](#_Toc500419014)

[Module 2: Lab Workflow Overview 4](#_Toc500419015)

[Module 2: Lab Instructions 4](#_Toc500419016)

[Module 2: Lab Summary 4](#_Toc500419017)

[Module 3: FILL IN NAME 4](#_Toc500419018)

[Module 3: Lab Workflow Overview 4](#_Toc500419019)

[Module 3: Lab Instructions 4](#_Toc500419020)

[Module 3: Lab Summary 4](#_Toc500419021)

**Delete me:** This is a linked table of contents. Do not try to edit manually. If you don’t know how to use this, contact Troggio.

# Lab Environment Overview

Module 1: **Using Watson Visual Recognition to Compare Mascots and People**

|  |  |
| --- | --- |
| Purpose: | This lab introduces the subject of visual recognition. After completing the lab, you should be familiar with:   * Navigating IBM Cloud Platform * Launching Services from IBM Cloud * Using Watson Visual Recognition (including training a model) |
|  |  |
| Tasks: | Tasks you will complete in this lab exercise include:   * Provisioning a service on IBM Cloud * Launching a visual recognition service on IBM Cloud * Testing the visual recognition model |

## Module 1: Lab Workflow Overview

## Module 1: Lab Instructions

| Step | Action |
| --- | --- |
| 1 | **IBM Cloud**   1. Log into IBM Cloud at <https://console.bluemix.net/dashboard/apps/>   If this is the first time you are using IBM Cloud (formerly Bluemix), an introduction window will appear, feel free to read it. Otherwise, click through.   1. Click “Next”, Click “Finish”.     We are now looking at the IBM Cloud Dashboard.   1. Click on the “Catalog” button found in the upper right hand corner of the screen     The Catalog is a compilation of the services offered on the IBM Cloud.    IBM Cloud supports both IBM products and services, as well as third-party. They are indicated by the small ovals below each service description. |
| 2 | **Launching a Service using IBM Cloud**  Let’s create our own service.   1. Type into the search bar: “Visual Recognition” .   Alternative way: In the Categories sections, select Watson, Visual Recognition   1. Click on “Visual Recognition”.      1. Type a Service name of your choice. This will be added to a list of your deployed services so it is helpful to use a descriptive title. (Ex. Visual Recognition Lab)     The “Free” plan is selected by default.   1. Select “Create” to deploy the Visual Recognition Service.     This page indicated that the service had been created.     1. Before we can get into the service, we need to get an API key by selecting “Service Credentials”. 2. Select “New Credential”      1. Expand the newly created credentials. 2. Copy the api\_key (part highlighted below) and save it in a notepad. You will need it later.       Now that we have the key,   1. Click the “Manage” tab to bring you back to the Visual Recognition homepage. |
| 3 | **Launching Watson Visual Recognition**   1. Launch the service by clicking on “Visual Recognition Tool”      1. Paste in the key that we just saved from the credentials and click the arrow.       We are now in the Visual Recognition Tool. There are already some pre-trained classifiers in the tool. We want to create our own.   1. Select “Create Classifier”.      1. Add a title. Again, it is helpful to use a descriptive title so that you can keep your classifiers organized and use them in the future.   *For the purpose of this lab, we will be training the tool with pictures of humans and pictures of mascots. A descriptive title could be Human or Mascot.*   1. Next we need to title the Class names. 2. Type “Mascot” in one and “Human” in the other. 3. Next, we want to input our dataset. The classifier takes only .zip files. From the Box folder, .zip the files names "mascot" and "people". In this case, our data sets have about 30 images. 4. Drag and drop the newly zipped folders into the appropriate class name.      1. Select “Create”.     After you select “Create”, you will be brought back to the Visual Recognition opening page where you will see your new Classifier training.  The orange circle indicates training. As you can see in the provided classifiers, the green dot indicates they are ready for images to be analyzed.      Once the classifier is done training, we are going to test our model. |
| 4 | **Testing the Model**     1. Drag and drop the first image titled “MascotTest.jpeg”.   What are the results? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Drag and drop the second image titled “HumanTest.jpeg”.   What are the results? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Now for the third image titles “OtherTest.jpeg”.   What are the results? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  What do these numbers mean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    Both the mascot and human have over 50% confidence rating for what the tool believes they are based on our small training set. However, look at the alternative option; the tool is very confidence that it is not the alternate option.  Why did the sprouts show up as a Mascot?   1. Let’s look at the other classifiers given to us to test to compare accuracy.      1. Drag and drop “MascotTest.jpeg” into the general classifier.      1. Drag and drop “HumanTest.jpeg” into the face detection classifier.      1. Lastly, drag and drop “OtherTest.jpeg” into the food classifier.     Why are these classifiers much more accurate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 5 | **Conclusion**  Now that you have completed this lab, you should be able to   * Navigate IBM Cloud Platform * Launch Services from IBM Cloud * Use Watson Visual Recognition (including training a models) |

## Module 1: Lab Summary

Write a summary of the lab here.