

CLOUD APPLICATION DEVELOPMENT – PART 2
PHASE 4

**PROJECT – IMAGE RECOGNITION WITH IBM CLOUD
VISUAL RECOGNITION**

TEAM MEMBERS:

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Image Recognition with IBM Cloud Visual Recognition

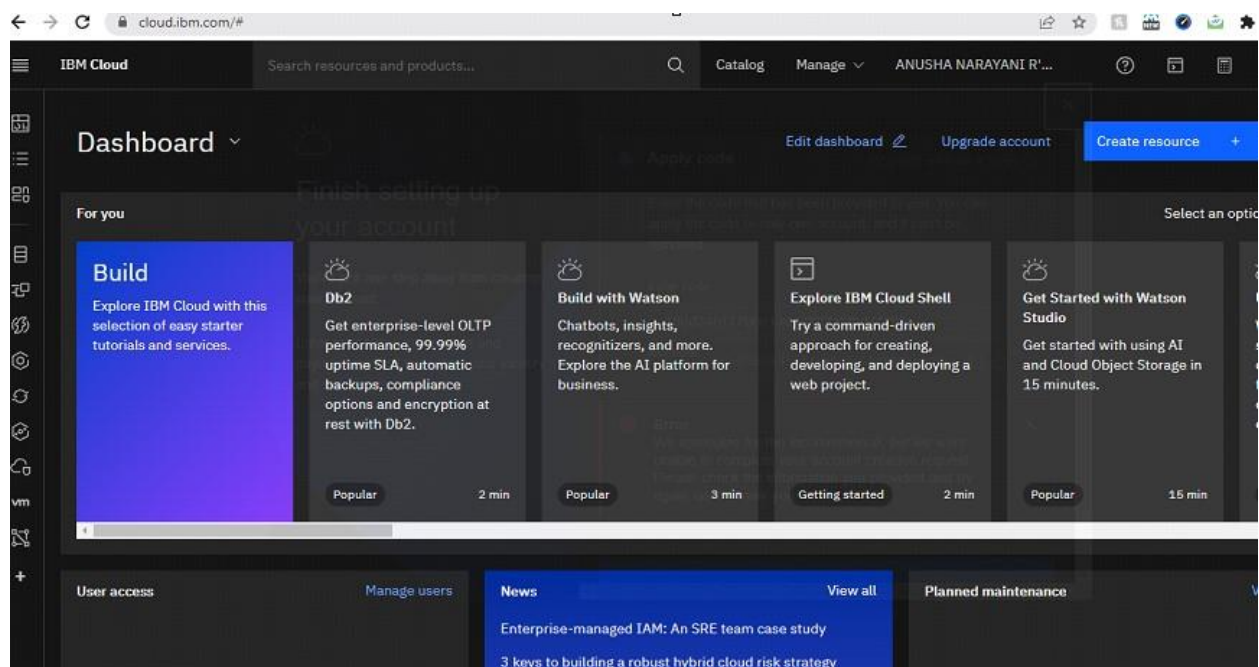
Phase 4: Development Part 2

In this part you will continue building your project.

- Continue building the image recognition system by integrating IBM Cloud Visual Recognition and AI-generated captions.
- Implement the image classification process using the IBM Cloud Visual Recognition API.
- Use natural language generation to create captions for the recognized images.

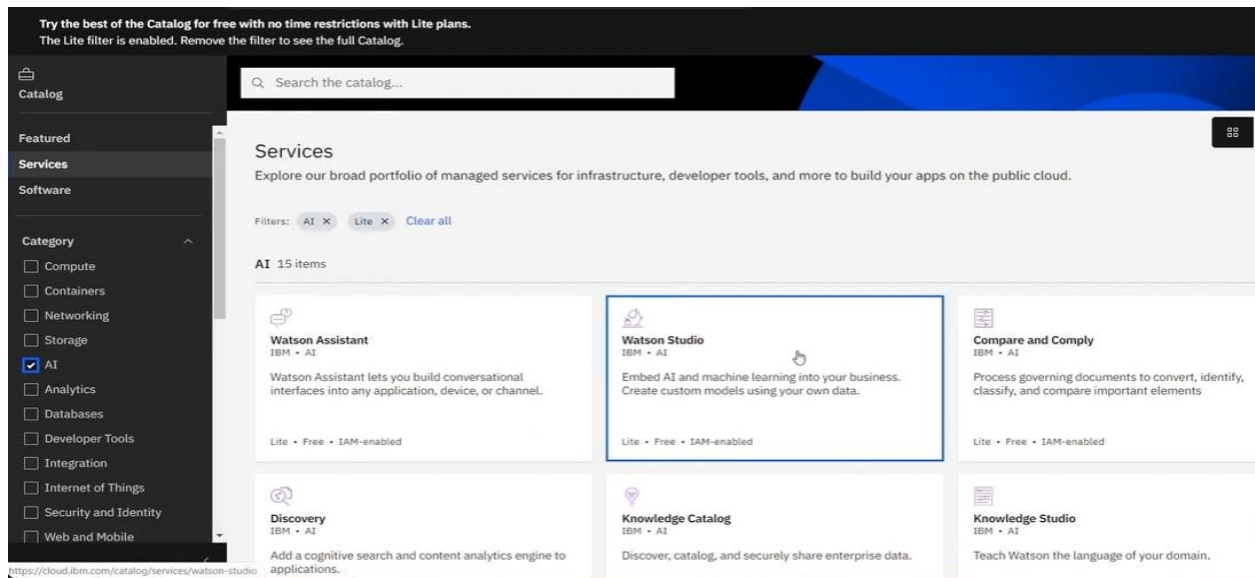
Step 1: Sign Up/Login to IBM Cloud

- Go to the [IBM Cloud website] (<https://cloud.ibm.com/>).
- Sign up for a new account or log in if you already have one.

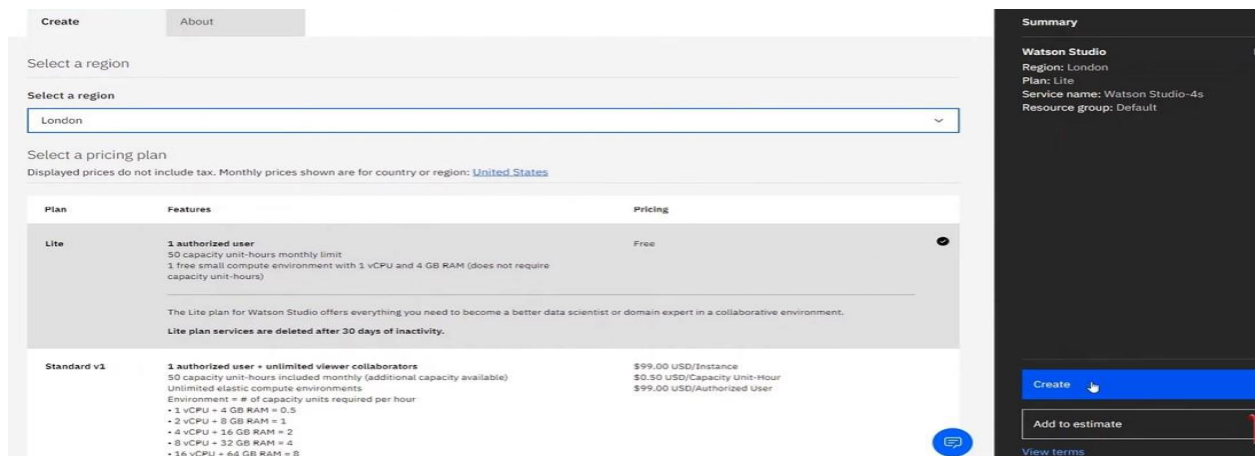


Step 2: Create a Visual Recognition Service

- After logging in, click on "Create Resource" at the top right.
- Search for "Visual Recognition" in the catalog.
- Select the Visual Recognition service.



- Choose the pricing plan that suits your needs.
- Click "Create" to create the service instance.



- Follow the setup instructions provided in the service dashboard to obtain your API keys and credentials.

IBM Cloud

Search resources and offerings...

Catalog

Docs

Support

Manage

Vidhan Bhonsle...

Resource list /

Visual Recognition-ww

Active

Add tags

Details

Actions...

Manage

Getting started

Service credentials

Plan

Connections

Start by viewing the tutorial

Launch Watson Studio

Getting started tutorial

API reference

Plan

Lite

Upgrade

Credentials

Download

Show credentials

API key:

.....

URL:

https://api.us-south.visual-recognition.watson.cloud.ibm.com/instances/83a8725c-1263-4e39-a...

View all credentials in the Service credentials tab.

FEEDBACK

eu-gb.dataplatform.cloud.ibm.com/registration/steptwo?redirectIfAccountExists=True&apps=watson_studio

IBM Watson Studio

Done!

Your Watson apps are ready to use.

Get Started


Waiting for eu-gb.dataplatform.cloud.ibm.com...

Cookie P...

Back

Create a project

Create an empty project, then add data and choose the right tools to accomplish your goals.



Create an empty project

Add the data you want to prepare, analyze, or model. Choose tools based on how you want to work: write code, create a flow on a graphical canvas, or automatically build models.


NEW AutoAI experiment tool: Fully automated approach to building a classification or reg...

USE TO

Prepare and visualize data

Analyze data in notebooks

Train models



Create a project from a sample or file

Get started fast by loading existing assets. Choose a project file from your system, or choose a curated sample project.

USE TO

Learn by example

Build on existing work

Run tutorials

https://eu-gb.dataplatform.cloud.ibm.com/projects/new-project/context=analytics#

reduce costs even further with our lowest priced Archive storage.

Built-in Aspera high-speed transfer
With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

Access and Key Management
IBM Identity and Access Management (IAM) policies allow for granular access control at the bucket level using role-based policies. Key Protect support allows customers to have their own managed encryption keys for higher level data security.

Pricing Plan: Monthly Process shown above reflect the: **United States**

PLAN	FEATURES	PRICING
<input checked="" type="radio"/> Lite	1 COS Service Instance Storage up to 25 GB/mo. Up to 20,000 GET requests/mo. Up to 2,000 PUT requests/mo. Up to Data Retrieval 10 GB/mo. Up to 5GB Public Outbound Applies to aggregate total across all storage bucket classes	Free
The Lite service plan for Cloud Object Storage includes Regional and Cross Regional resiliency, flexible data classes, and built in security.		
<input type="radio"/> Standard	There is no minimum fee, so you pay only for what you use.	Expand each section to view details

Cancel

Create

reduce costs even further with our lowest priced Archive storage.

Built-in Aspera high-speed transfer
With IBM Cloud Object Storage Aspera high-speed data transfer, you can improve data transfer performance by quickly transferring data over long distances, and under various network conditions. It is natively integrated into Cloud Object Storage and there is no additional cost for uploading data.

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The Lite service plan for Cloud Object Storage includes Regional and Cross Regional		
<input type="radio"/> Standard	There is no minimum fee, so you pay	details

Cancel

Create

Confirm Creation

Plan

Lite

Resource group

Default

Service name

cloud-object-storage-rz

New project

Define project details

Name

Project name

Description

Project description

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project includes integration with Cloud Object Storage for storing project assets.

Storage

cloud-object-storage-rz

New project

Define project details

Name

Image Recognition

Description

Image Recognition using Watson

Choose project options

☐ Restrict who can be a collaborator ⓘ

Project includes integration with [Cloud Object Storage](#) for storing project assets.

Storage

cloud-object-storage-rz

my projects / image-recognition

Launch IDE

Assets

Environments

Jobs

Deployments

Access Control

Settings

Image Recognition

Last Updated: Apr 18, 2020

Readme ⓘ

Overview

Date created

Apr 18, 2020

Description

Image Recognition using Watson

Storage

Cloud Object Storage

0 Byte used

Collaborators

Huzaif Sayyed

Admin

View all (1)

Readme

Choose asset type

Available asset types

Data

Connection

Notebook

Dashboard

Watson Machine Lea...

Deep learning experi...

Streams flow

Decision Optimization...

Visual Recognition model

Classify images or detect objects with the custom models that you define.

Visual Recognition ...

AutoAI experiment

Natural Language CL...

Modeler flow

Data Refinery flow

0

Assets

1

Collaborators

Early access to AutoAI code generation is now available

Hi,

Get automatically generated Python code in notebooks!

Thanks,

Watson Studio Team

[Join the Waitlist](#)

Step 3: Gather and Organize Your Images

- Collect a set of images for each class/category you want to recognize.
- Ensure that the images are clear, relevant, and well-labeled.
- Organize these images into folders, each folder representing a specific category.

Step 4: Train Your Custom Classifier

- Access your Visual Recognition service instance from the IBM Cloud dashboard.
- Click on "Launch Tool" to open the Visual Recognition tool.
- In the tool, click on "Create a Project."
- Add a name for your project and click "Create."
- Inside your project, click on "Add a Collection."
- Upload images from your folders to the respective collections/categories.
- Once images are uploaded, click on "Train" to train your custom classifier.

Explicit Model

Assess whether an image contains objectionable or adult content that may be unsuitable for general audiences.

Pricing Plan: Monthly Process shown above reflect the: United States

PLAN	FEATURES	PRICING
<input checked="" type="radio"/> Lite	1,000 Events per month towards: Pre-trained model classification (General, Food, Explicit) (images) Custom Model classification (images) Custom Model training (images) 2 Custom Models 1 Lite Plan instance per IBM Cloud Organization Free Exports to Core ML	Free
<input type="radio"/> Standard	Access to everything from the Lite Plan including... Train up to 100,000 images per month (only charged if training occurs during the month) Unlimited image classifications per month (charged per image) Unlimited custom models Unlimited free exports to Core ML	

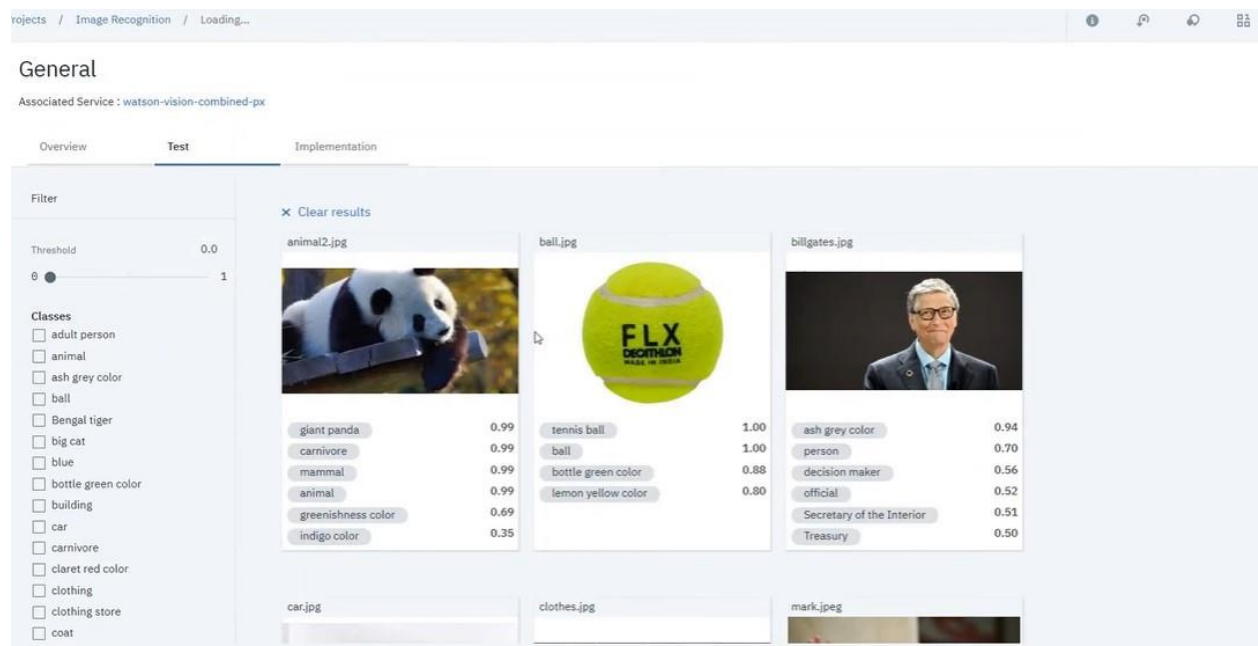
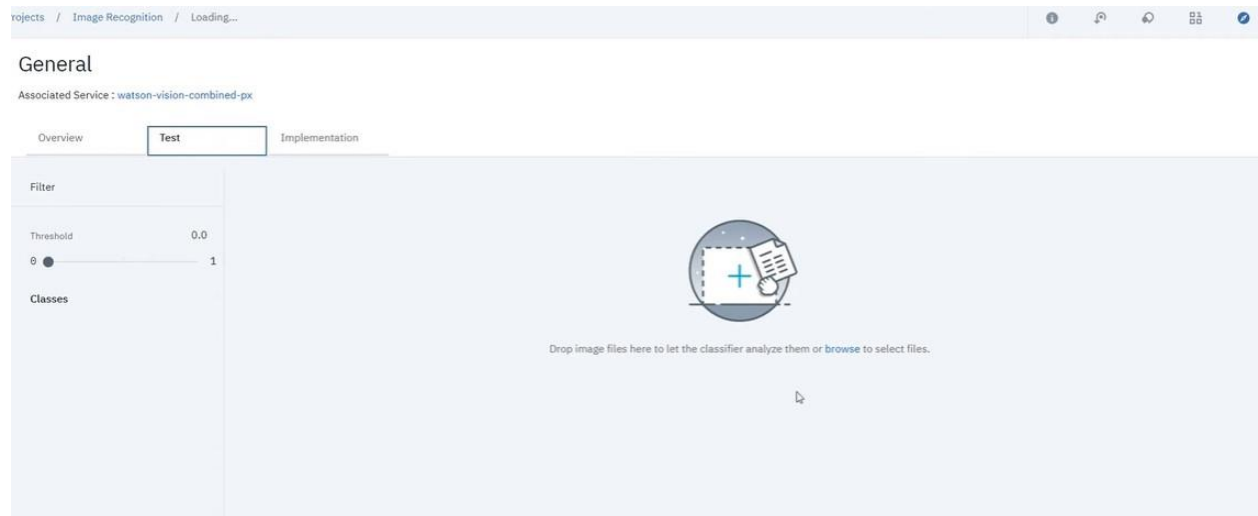
The Lite Plan gets you started with 1,000 events (images) per month and the ability to train two Custom Models. Users wishing to use more premium features or increase usage must upgrade to a Standard Plan or a Subscription Plan.

Cancel

Create

Step 5: Test Your Custom Classifier

- After training is completed, you can test your classifier by uploading new images.
- The Visual Recognition service will classify these new images into the categories you defined.



- Select the filter 'beige color' to display the images with beige color in it

Projects / Image Recognition / Loading...

General

Associated Service : watson-vision-combined-px

Overview **Test** Implementation

Filter

Threshold 0.0


0 1

Classes

- ☐ adult person
- ☐ animal
- ☐ ash grey color
- ☐ ball
- ☐ bar
- ☒ beige color
- ☐ Bengal tiger
- ☐ big cat
- ☐ blue
- ☐ bottle green color
- ☐ building
- ☐ car
- ☐ carnivore
- ☐ claret red color
- ☐ cloak

× Clear results

clothes2.png



garment	0.84
beige color	0.82
pale yellow color	0.82
clothing	0.80
person	0.80
kurta dress	0.70
shirt	0.70
salwar (dress)	0.59
trouser	0.59
fabric	0.53
saree fabric	0.53

- Select the filter 'ash gray color' and 'big cat' to display the relevant images

Projects / Image Recognition / Loading...

General

Associated Service : watson-vision-combined-px

Overview **Test** Implementation

Filter

Threshold 0.0

0 1

Classes

- ☐ adult person
- ☐ animal
- ☒ ash grey color
- ☐ ball
- ☐ bar
- ☐ beige color
- ☐ Bengal tiger
- ☒ big cat
- ☐ blue
- ☐ bottle green color
- ☐ building
- ☐ car
- ☐ carnivore
- ☐ claret red color
- ☐ cloak

Treasury 0.50

roadster 0.52


shoe 0.55

sports car 0.50

tongue (of shoe) 0.51


plimsoll shoe 0.50

Shoes1.jpg



ash grey color	0.99
foot pedal	0.84
lever	0.84
bar	0.84
sports equipment	0.80
clothing	0.78
footwear	0.70
shoe	0.58

tiger.jpg



animal	0.98
mammal	0.97
carnivore	0.97
feline	0.97
big cat	0.97
tiger	0.78
light brown color	0.75
pale yellow color	0.74