

# **Arunai Engineering College**

Code: 5104

**Department of  
Information Technology**



# Image recognition with IBM cloud visual recognition



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# Introduction

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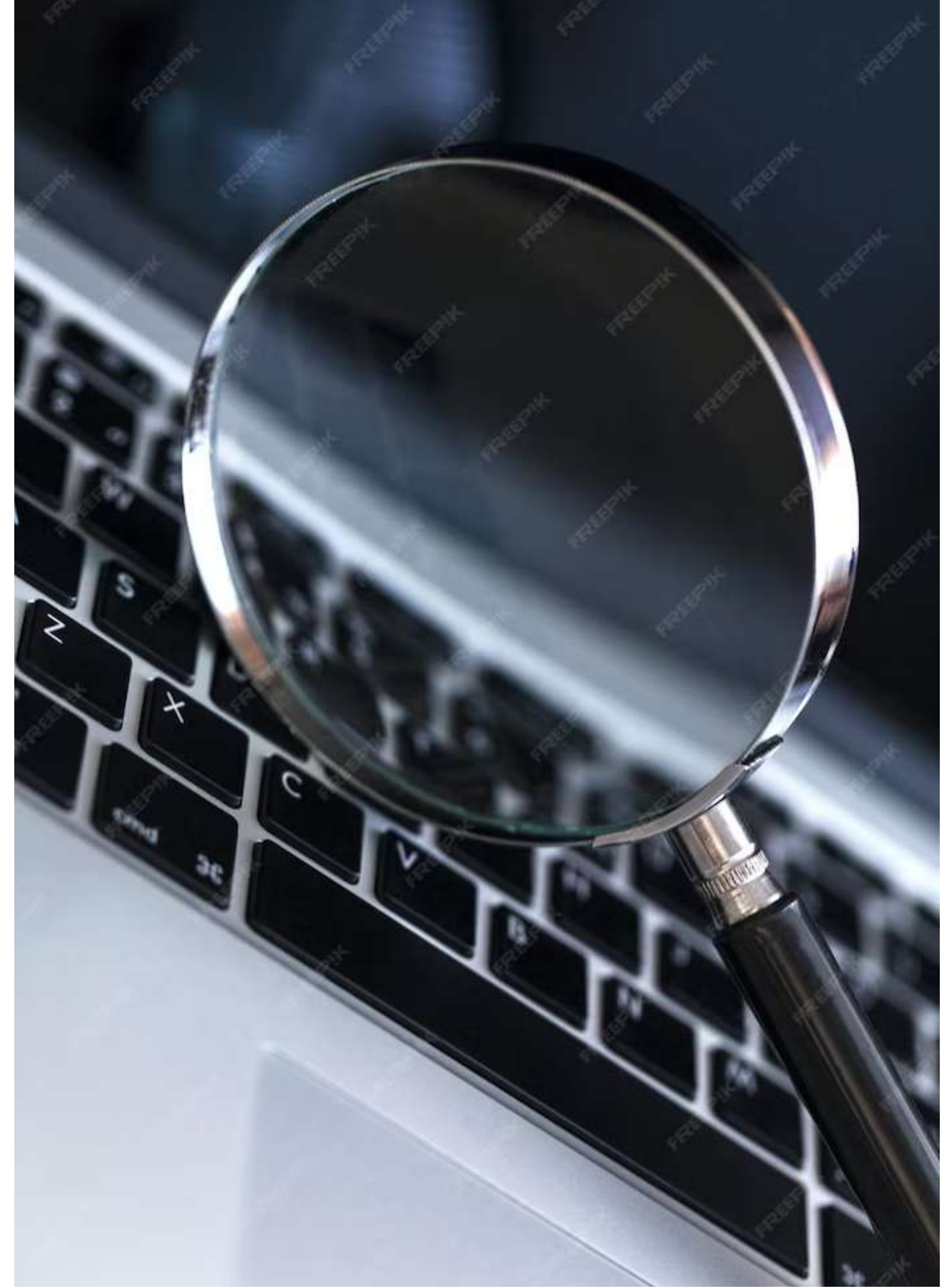
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A man with short dark hair, wearing a dark blue button-down shirt, is seated at a desk in a bright office. He is looking intently at a laptop screen, with his hands positioned on the keyboard. The background is softly blurred, showing office furniture and a window with natural light. A black text box is overlaid on the left side of the image.

IBM Cloud Visual Recognition offers many benefits for businesses, including improved accuracy in image recognition, increased efficiency in workflows, and enhanced customer experiences. The service can also help businesses save time and money by automating manual processes.



What is IBM  
Cloud Visual  
Recognition?

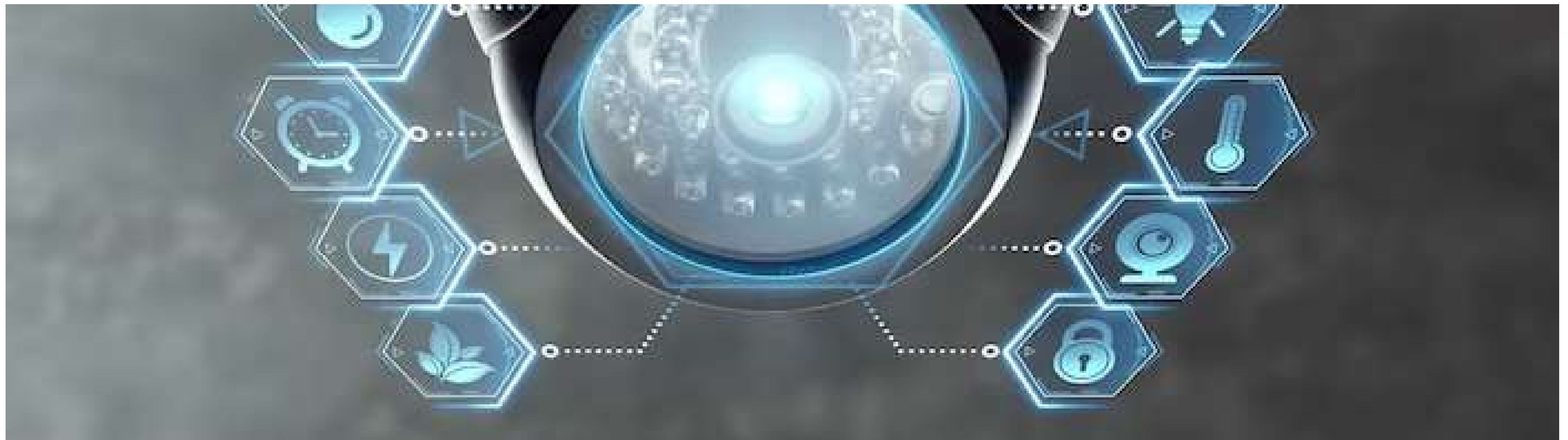
## About the project



**IBM Cloud Visual Recognition** is a cloud-based image recognition service that uses deep learning algorithms to analyze and classify images. It can identify objects, scenes, and faces within images, as well as detect text and inappropriate content. IBM Cloud Visual Recognition can be used for a wide range of applications, from retail to healthcare.

# About the project

IBM Cloud Visual Recognition can be used for a wide range of applications, including retail, healthcare, manufacturing, and security. It can help businesses improve inventory management, identify product defects, monitor patient conditions, and detect security threats.



# Defining a target

IBM Cloud Visual Recognition uses deep learning algorithms to learn from images and identify objects, faces, and other visual elements. It can be used to analyze large volumes of images and extract valuable insights. IBM Cloud Visual Recognition is a powerful tool for businesses looking to improve their visual search capabilities and enhance their customer experience.

Aquarius is one of the oldest constellations. Its name means “water bearer,” and its symbol is a representation of water.

**2.** Capricornus is the smallest constellation in the zodiac. Its name means “horned goat” and is represented by a goat with a fishtail.

**3.** Aries is one of the zodiac constellations, and its symbol represents the ram’s horns. It’s unique because its image has changed over time.

**4.** Cassiopeia is a constellation in the northern sky. It is easily recognizable due to its distinctive ‘W’ shape, formed by five bright stars.

# Creating an IBM cloud account

## Steps for Setting up the visual recognition service, and obtaining API keys



1. Go to the IBM cloud website (<https://www.ibm.com.cloud>) and click on "get started for free" or "sign up" to create a new account.
2. Fill in the required information to register for an account. You may need to provide your name, email address, and create a password.
3. Once you've created an account, sign in to the IBM Cloud dashboard.
4. In the dashboard, click on "Create resource" or "Catalog" to browse available services.
5. In the catalog, search for "Visual Recognition" or go directly to the Visual Recognition service page.



6. Click on the Visual Recognition tile and then click on "Create" to set up the service.

7. You may be asked to choose a pricing plan. For getting started, you can select the "Lite" plan which provides a certain level of free usage.



8. After the service is created, navigate to the service page. Here, you will find relevant information such as service credentials and API keys.

9. To obtain the API keys, click on "Manage" or "Service credentials" tab within the Visual Recognition service page.



10. If no credentials exist, click on "New credential" to create a new set of API keys. Otherwise, you can use the existing credentials.

11. The API keys, typically composed of an API key and a service endpoint URL, will be listed under the credentials. Copy and store them securely.

# Source code:

```
# Import necessary libraries
from flask import Flask, request, render_template
import openai

# Initialize Flask app
app = Flask(_name_)

# Set your OpenAI API key
openai.api_key = 'YOUR_API_KEY'

# Create a basic HTML form for uploading images
@app.route('/', methods=['GET', 'POST'])
def upload_image():
    if request.method == 'POST':
        # Handle the uploaded image here (you can save it or process it)

        # Generate a caption using OpenAI's GPT-3
        image_caption = generate_caption(image_path) # Implement this function

        return render_template('result.html', caption=image_caption)

    return render_template('index.html')

# Function to generate captions using GPT-3
def generate_caption(image_path):
    # You need to implement the logic to send the image to GPT-3 for caption generation
    # Use OpenAI's GPT-3 library to send the image and receive the caption
```





Conclusi  
on

## Where we are

IBM Cloud Visual Recognition is a powerful tool that enhances image recognition capabilities. It offers many benefits for businesses, including improved accuracy, increased efficiency, and enhanced customer experiences. With the ability to customize and integrate with other IBM Cloud services, IBM Cloud Visual Recognition is a valuable asset for businesses looking to improve their workflows and stay ahead of the competition.

