

Image recognition

921821104037 : S. Sarathrajan

PHASE -3 Document Submission

Build Image Recognition System

How to do this -Start building the image recognition system using IBM Cloud Visual Recognition.

Create an IBM Cloud account, set up the Visual Recognition service, and obtain API keys.

Design a simple web interface where users can upload images and view the AI-generated captions.

To start building an image recognition system using IBM Cloud Visual Recognition and create a web interface, follow these steps:

- **Create an IBM Cloud Account:**

If you don't have one, sign up for an IBM Cloud account at <https://cloud.ibm.com/registration>.

- **Set Up IBM Visual Recognition Service:**

Log in to your IBM Cloud account.

From the IBM Cloud Dashboard, click "Create Resource." Search for "Visual Recognition" and select it.

Follow the prompts to create a Visual Recognition service instance.

- **Obtain API Keys:**

After your Visual Recognition service is created, you can obtain API keys.

Navigate to your service instance, click "Service credentials" on the left sidebar, and create a new credential with an API key.

- **Design a Web Interface:**

You can use various web development technologies for this, but I'll outline a basic approach using HTML and JavaScript:

- **Create an HTML file for your web interface Here is a basic code**

```
<!DOCTYPE html>
<html>
<head>
  <title>Image Recognition System</title>
</head>
```

```

<body>
  <h1>Image Recognition System</h1>
  <input type="file" id="imageInput" accept="image/*">
  <button onclick="uploadImage()">Upload Image</button>
  <div id="result"></div>

  <script>
    Function uploadImage() {
      Var input = document.getElementById('imageInput');
      Var file = input.files[0];
      Var formData = new FormData();
      formData.append('images_file', file);

      // Replace 'YOUR_API_KEY' and 'YOUR_URL' with your actual IBM Visual
      Recognition API key and endpoint URL.
      Var apiKey = 'YOUR_API_KEY';
      Var apiUrl = 'YOUR_URL';

      // Make an API call to IBM Visual Recognition
      Fetch(apiUrl, {
        Method: 'POST',
        Headers: {
          'Authorization': 'Bearer ' + apiKey,
        },
        Body: formData
      })
      .then(response => response.json())
      .then(data => {
        // Handle the response, which contains AI-generated captions
        Var captions = data.images[0].classifiers[0].classes;
        Var resultDiv = document.getElementById('result');
        resultDiv.innerHTML = '<h2>AI-generated Captions:</h2>';
        for (var i = 0; i < captions.length; i++) {
          resultDiv.innerHTML += '<p>' + captions[i].class + ' (' + captions[i].score +
          '</p>';
        }
      })
      .catch(error => {
        Console.error('Error:', error);
        // Handle errors, e.g., display an error message to the user.
      });
    }
  </script>
</body> </html>

```

In the JavaScript section, you'll need to use your API keys to make API calls to IBM Visual Recognition service, passing the image data for analysis. You can refer to IBM's documentation for code examples on how to do this.

- **Implement IBM Visual Recognition API Calls:**

In your JavaScript code, make a POST request to the IBM Visual Recognition API with the image data.

Handle the API response, which will contain the AI-generated captions.

Display these captions in the “result” div or any other way you prefer.

- **Test and Deploy:**

Test your web interface locally to ensure it's working as expected.

Once tested, you can deploy your web interface to a hosting platform or server.

Remember to secure your API keys and follow best practices for web development and security to protect user data and maintain the integrity of your image recognition system