

## **\*\*Image Recognition with IBM Cloud Visual Recognition\*\***

The objective of this project is to develop an image recognition application that uses IBM Cloud Visual Recognition to identify objects in images and generate captions that describe the images. The application will be used to enhance user engagement and storytelling on social media platforms.

## **\*\*Design Thinking Process\*\***

The design thinking process for this project involved the following steps:

1. **\*\*Empathize:\*\*** We interviewed social media users to understand their needs and pain points when it comes to sharing and consuming visual content. We learned that users want to be able to easily find and understand images, and they also want to be able to create and share engaging and informative captions.
2. **\*\*Define:\*\*** Based on our user interviews, we defined the following problem statement: How can we create an image recognition application that helps social media users to easily find and understand images, and to create and share engaging and informative captions?
3. **\*\*Ideate:\*\*** We brainstormed a number of potential solutions to the problem statement. We decided to focus on developing an application that uses IBM Cloud Visual Recognition to identify objects in images and generate captions.
4. **\*\*Prototype:\*\*** We developed a prototype of the application using IBM Cloud Visual Recognition. The prototype allowed users to upload images and receive a list of objects that were identified in the images. The prototype also generated captions that described the images.
5. **\*\*Test:\*\*** We tested the prototype with a group of social media users. The users found the application to be easy to use and helpful. They also reported that the AI-generated captions were accurate and engaging.

## **\*\*Development Phases\*\***

The development phases for this project were as follows:

1. **\*\*Requirements gathering:\*\*** We gathered requirements from social media users and stakeholders to identify the features and functionality that the application should have.
2. **\*\*System design:\*\*** We designed the system architecture and database schema for the application.



3. **Implementation:** We implemented the application using the following technologies:

- \* IBM Cloud Visual Recognition

- \* Python

- \* Flask

- \* React

4. **Testing:** We tested the application to ensure that it meets the requirements and that it is free of bugs.

5. **Deployment:** We deployed the application to a production environment.

### **User Interface**

The user interface of the application is simple and easy to use. The user can upload an image to the application and receive a list of objects that were identified in the image. The application also generates a caption that describes the image. The user can then share the image and caption on social media.

### Technical Implementation Details

The application uses the following technologies:

- \* IBM Cloud Visual Recognition: To identify objects in images and generate captions.

- \* Python: To develop the backend of the application.

- \* Flask: To create a web server for the application.

- \* React: To develop the frontend of the application.

### Integration of IBM Cloud Visual Recognition

The application uses the IBM Cloud Visual Recognition API to identify objects in images and generate captions. The API is integrated into the application using the Python requests library.

### AI-Generated Captions



AI-generated captions enhance user engagement and storytelling in the following ways:

- \* AI-generated captions can help users to understand images more quickly and easily.
- \* AI-generated captions can be used to create engaging and informative stories.
- \* AI-generated captions can help users to reach a wider audience, including people with disabilities.

## Conclusion

This project demonstrates how IBM Cloud Visual Recognition can be used to develop an image recognition application that can enhance user engagement and storytelling on social media platforms. The application is easy to use and provides users with valuable information about the images that they upload.

