CLOUD APPLICATION DEVELOPMENT – PHASE 1

PROJECT – IMAGE RECOGNITION WITH IBM CLOUD VISUAL RECOGNITION

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Project Proposal: AI-Enhanced Image Recognition and Captioning Platform

Problem Definition

The project aims to develop an AI-enhanced image recognition and captioning platform using the IBM Cloud Visual Recognition service. The primary goal is to create a user-friendly platform that allows users to upload images, automatically classify them, and generate engaging captions using AI. This platform will enable users to craft compelling visual stories, enhancing their ability to connect with their audience through captivating visuals and narratives.

Design Thinking

Phase 1: Problem Definition and Design Thinking

In this initial phase, we'll outline our understanding of the problem statement and the design thinking approach we will adopt to solve it. Here are the key components of our design thinking process:

1. Image Recognition Setup

Objective: Set up the IBM Cloud Visual Recognition service and obtain the necessary API keys.

Actions:

- Register for an IBM Cloud account if not already done.
- Access the IBM Cloud Visual Recognition service.
- Obtain API keys or credentials required for authentication.

Success Criteria: Successful setup of the IBM Cloud Visual Recognition service with functioning API keys.

2. User Interface

Objective: Design a user-friendly interface for users to upload images and view AI-generated captions.

Actions:

- Create wireframes and mockups for the user interface.
- Design a responsive web or mobile application interface.
- Implement an intuitive image upload feature.
- Develop a user dashboard or gallery for image management.

Success Criteria: A visually appealing and user-friendly interface that allows users to easily upload images and view AI-generated captions.

3. Image Classification

Objective: Implement the image classification process using the IBM Cloud Visual Recognition API.

Actions:

- Integrate the IBM Cloud Visual Recognition API into the system.
- Develop a backend process to send user-uploaded images for classification.
- Store classification results, including labels and confidence scores.

Success Criteria: Accurate image classification with labels and confidence scores retrieved from the Visual Recognition API.

4. AI-Generated Captions

Objective: Integrate natural language generation to create captions for the recognized images.

Actions:

- Integrate a natural language generation (NLG) tool or library.
- Utilize image classification results as input to the NLG system.
- Fine-tune the NLG model for coherent and engaging captions.

Success Criteria: Creation of relevant, coherent, and engaging captions for recognized images.

5. User Engagement

Objective: Design features to allow users to explore, save, and share their AI-enhanced images.

Actions:

- Implement image saving and collection management features.
- Enable image sharing functionality on social media platforms or via links.
- Consider additional features like image editing (e.g., cropping, filters) for user customization.

Success Criteria: Users can easily explore, save, and share their AI-enhanced images, enhancing user engagement.

Conclusion

In this initial phase, we have defined the problem statement and outlined our design thinking approach for the project. The next phases will involve the implementation of each of these components and the development of the AI-enhanced image recognition and captioning platform. The success of this project

will not only depend on technical implementation but also on user satisfaction and engagement with the platform.