IMAGE CAPTION GENERATOR TAKING ADVANTAGE OF BIG DATA

- Real-time Solutions to Image Intepretation and Analysis -

Project Overview

1. A pretrained model and various images are loaded into an amazon S3 bucket

2. The S3 contents will be loaded into SageMaker and Lambda instances where the image will be vectorized and a caption will be predicted

3. Captions can be saved as output for various future uses:

- Queryable Database
- Image + Text Analysis
- Further Human Analysis

Image Caption with Big Data Techniques

- Cloud storage for unstructured data with better scalability and durability
- Quickly deploy customized ML models or built-in algorithms
- Create real-time subtitles or picture descriptions for easy image management and usage

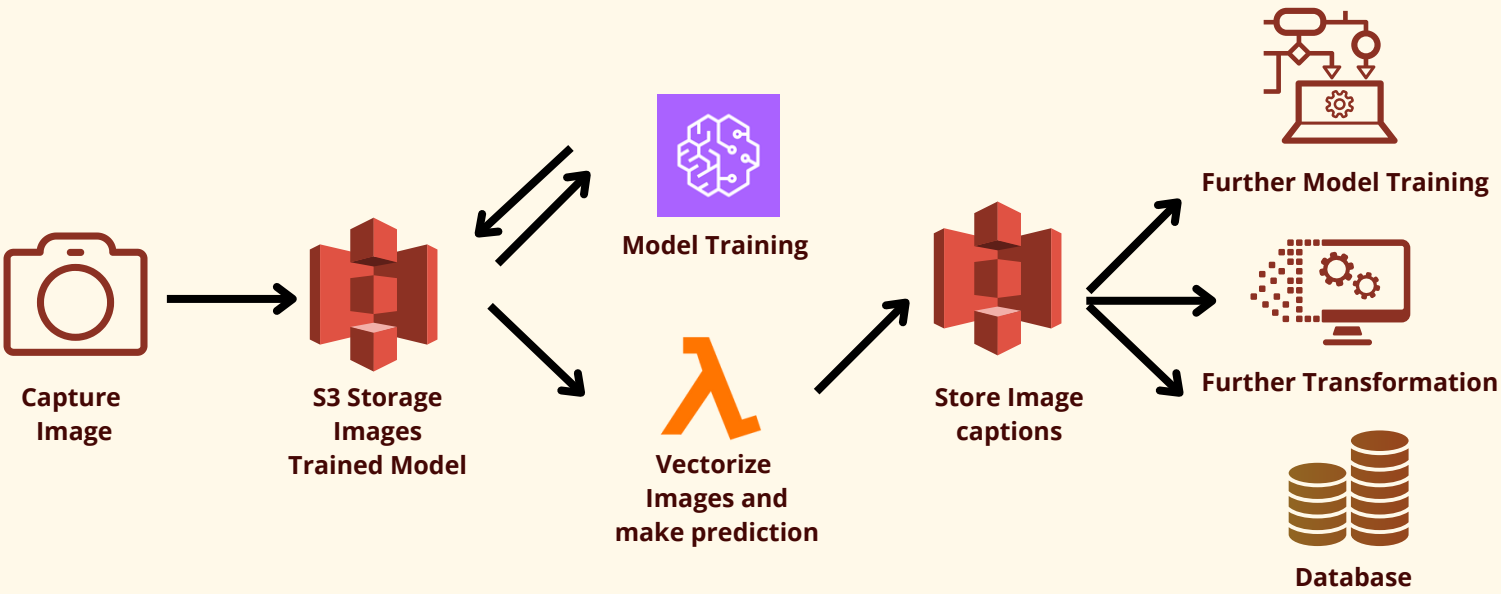
VS

Traditional Image Caption Methods

- RDBMS cannot store unstructured or semi-structured data
- Expensive file management and storage in local systems
- Time-consuming and labor-insentive for interpreting and tagging images
- Lack keywords of images for future users to search and utilize

Project Snap Shot

AWS Pipeline Structure



Business Application

Social Media Analytics

By analyzing pictures posted by people on forums, channels etc. Companies can identify evolving trends on the internet and prepare marketing campaigns accordingly

Medical Industry

Healthcare Industry - Identify the illnesses or describe image based medical reports such as X-rays, PET scans etc.

Clothing Industry

Businesses in the clothing industry can benefit from the image caption generator by analysing trending outfits

News Industry / Law Enforcement

Enabling the public to post pictures of the crime scene and quickly getting descriptions of the incident

Team 2

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