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November 30, 2018

METHOD FOR SWAPPING OUT USER-GENERATED PHOTOS WITH HIGH QUALITY PHOTOS

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METHOD FOR SWAPPING OUT USER-GENERATED PHOTOS WITH HIGH QUALITY PHOTOS

ABSTRACT

The present application discloses a system and method to assist a photographer to swap out their user-generated photo with a high quality photo by using appropriate software. The disclosed system includes a software application that enables the user to upload a captured photo for processing, which may include the user's image. A landscape or object in the photo is detected by the application, which searches for a high quality photo of the same object, matching the user-generated photo. The application then swaps the user's image into the high quality photo and/or allows the user to customize it, before cropping and aligning the image to match the user captured photo. The method reduces time and eliminates manual effort for improving the quality of the captured photo.

BACKGROUND

Generally, a mobile phone equipped with a camera is frequently used to take photos. For example, people visiting monuments such as the Eiffel Tower, Mount Rushmore, Heijokyo-ato, etc. have the privilege of taking a photo of the monument with or without them, which they could post into any social media. However, there could be better pictures of those places compared to the images captured by the user. Thus, billions of users could post a lot of poor quality photos of landscapes, monuments, places, objects, etc. to the websites.

There is a need, therefore, to address the quality in the most commonly taken photos such as those of famous landscapes, monuments, skylines, bridges, structures, objects, etc.

DESCRIPTION

The present publication discloses a system and method to assist a photographer to swap out their user-generated photo with a high quality photo. The disclosed system includes a software application that enables the user to swap his photo with a higher quality photo. The method involves the following steps.

In step A, a user captures a photo of an object with or without capturing themselves within the photo. In step B, the user-captured photo is uploaded in any storage device using the software application. In step C, the object is detected by the software application using visual image recognition or geolocation data in the system. Thereafter, in step D, the software could search publicly available or appropriately licensed photographs, or those from an internal database to match with a photo of that object with similar or identical perspective. The similar or identical perspective could be an angle towards object, distance from object, time of day, weather or time of year. In step E, the application selects an appropriate high quality image. In step F, the application determines whether there are people in the original photo who need to be cropped and swapped into the image, and adds them to the image. The software could then, in step G, crop and align the image to match the user generated photo with the high quality image. Finally, a new photo is provided by swapping the user's photo with the high quality image.

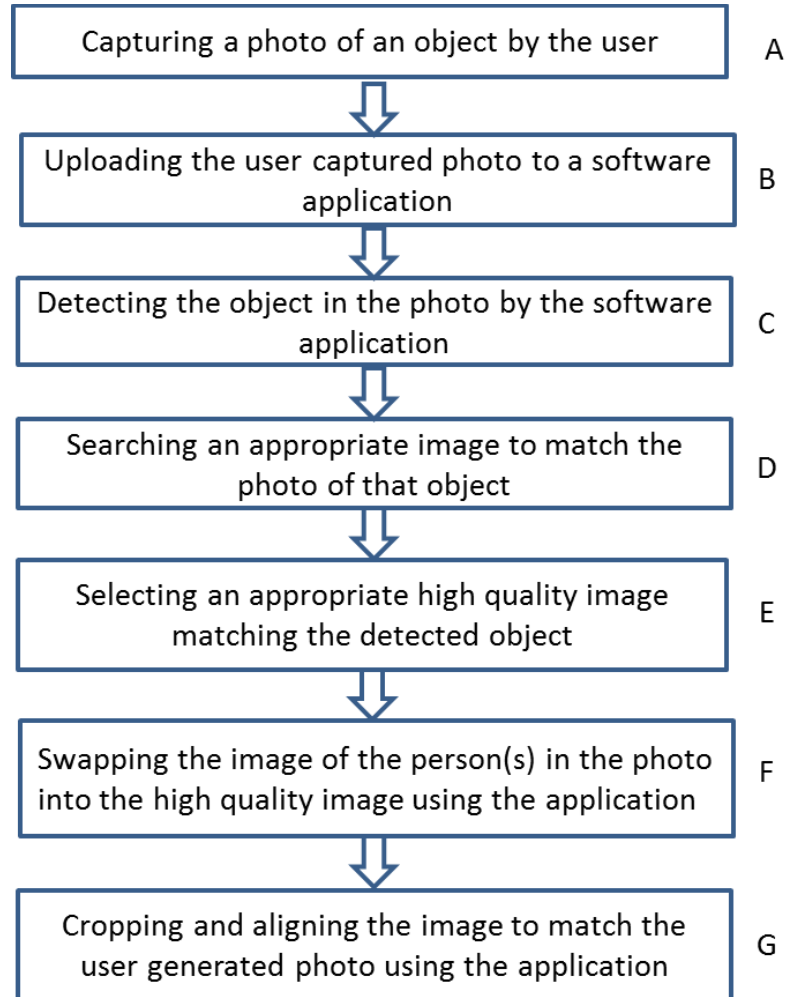|	
Capturing a photo of an object by the user	A
Uploading the user captured photo to a software application	B
Detecting the object in the photo by the software application	C
Searching an appropriate image to match the photo of that object	D
Selecting an appropriate high quality image matching the detected object	E
Swapping the image of the person(s) in the photo into the high quality image using the application	F
Cropping and aligning the image to match the user generated photo using the application	G

FIG 1: Flow chart of Swapping out User Captured Photos with High Quality Photos

In step F, selecting a person to remain in the photo may include providing an option to the user to select who he wants to retain in the image. Face detection software could suggest the people to be included from any of the user's devices or from Cloud storage, or additionally the photographer could manually select the persons or objects. The software identifies the selected person and proceeds to draw an outline. Here the user can zoom in and alter the profile in cases where the software makes mistakes in the outline. Once the user or software completes the identification of people and outlines, the software could source the pixels within the selected

outline and superimpose them onto the cropped high-quality image. The user is then shown a preview of the superimposed people on the cropped high quality image. Further, the user is provided with an option to slightly drag or move the people or object(s) to optimize the photo within the application.

The software application disclosed enables the user to swap user photos with high quality photos by replacing imagery rather than simply providing editing tools such as brightness, saturation, contrast, shadows, highlights, etc. The software provides a way to achieve improvement in the quality of photos to show the user's location and experience in a beautiful way. Optionally, the system facilitates sharing of the improved photo or captured image.

The system and method for swapping out user-generated photos with high quality photos thereby creates a novel type of photo enhancement capability, with reduced time and manual effort.

The systems and methods described herein do not require collection, storage or use of a user's personal data or information, beyond the use of the images that the users would like to swap for higher-quality images. In situations in which the systems and methods discussed herein may collect personal information about users, or may make use of personal information (e.g., photos, videos, user data), users are provided with one or more opportunities to control how information is collected about the user and used in one or more described features. A user is provided with control over whether programs or features collect user data (e.g., recognition of a user's face in a photo or video, information about a user's social network, user characteristics (age, gender, profession, etc.), social actions or activities, a user's preferences, content created or

submitted by a user, a user's current geographic location, etc.). A user is provided with control over whether programs or features collect user information about that particular user or other users relevant to the program or feature. Each user for which personal information is to be collected is presented with one or more options to allow control over the information collection relevant to that user, to provide permission or authorization as to whether the information is collected and as to which portions of the information are to be collected. For example, users can be provided with one or more control options over a communication network. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed. For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized to a larger region so that a particular location of a user cannot be determined.