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SEMANTICALLY MAPPING INFORMATION ABOUT A USER ONTO A DIGITAL IMAGE UPLOADED BY A USER

Introduction

The present disclosure relates to computer-implemented systems and methods for semantically mapping information about a user onto a digital image associated with the user. More specifically, computer-implemented systems and methods to map, associate, or tag semantically relevant information (e.g., preferences, activities, etc.) about a user to a digital image associated with the user. In one particular embodiment, a first user may upload an image, for example, a photo including the first user, to an online platform (e.g., a social media platform). In some instances, the first user may provide information about themselves to the online platform, such as preferences (favorite movies, books, restaurants, podcasts, sports, etc.), most recent activities (most recent movie watched, book read, sports watched, food tasted, podcast listened to, etc.), languages spoken, and/or the like. Then a tag or an association may be generated that links at least some of the information about the first user with the image on the online platform. For instance, when the image includes a picture of the user's head, the information about the user associated with things the user sees/reads (e.g., movies, books, sports) may be tagged to the user's eyes on the image, similarly, the information about the user associated with things the user eats/speaks (e.g., food, restaurants, or languages) may be tagged to the user's mouth in the image, and the information about the user associated with things the user listens to (e.g., music, podcasts) may be tagged to the user's ear(s) in the image. A second user may then view the first user's digital image on the online platform and hover over and/or click the first user's eyes, mouth, or ear(s) in the digital image to be presented with the respective information about the first user that is tagged to the first user's eyes, mouth, or ear(s). For example, a first user may provide their favorite restaurant and a photo of themselves to their

social media profile on a social media platform, where the first user's mouth in the photo may be tagged with the first user's favorite restaurant. A second user may then be looking at the photo on the first user's social media profile and hover their cursor over the first user's mouth in the photo, which causes an indication of the first user's favorite restaurant to be displayed. Similarly, parts of the digital image may be tagged without the user information. For instance, parts of the digital image may be semantically tagged with questions that the second user may hover over and/or click to ask the first user to respond to, and/or advertisements related to the user information may be semantically tagged to parts of the digital image.

Traditionally, information about a user on an online platform is separate from an image of the user. As such, it is often difficult for other users to connect the information about the user with the user. Further, digital images can be hardcoded to tag specific parts of the digital images with information or advertisements, however, there has not been semantic mapping or tagging of information and advertisements to specific parts of digital images.

Summary

Computer-implemented systems and methods for semantically mapping information about a user onto a digital image associated with the user can provide for greater connections between information about a user and digital images associated with a user to viewing users who would otherwise need to separately view such information and digital images. In one particular embodiment, a user may provide a digital image to an online platform. The user may additionally provide information about themselves to the online platform. A tag may be generated for one or more content items to link the one or more content items with the digital image on the online platform, the one or more content items including items related to at least some of the information about the user or including at least some of the information about the user. In one

embodiment, each tag semantically links related ones of the content items with a particular part of the digital image. When another user views the digital image, the other user may interact with the tag associated with the particular part of the digital image to view the related ones of the tagged content items.

In one particular embodiment, a first user may upload a digital image of themselves to an online platform. Information about the first user may be provided to the online platform. The digital image of the user may then be semantically tagged based at least in part on the information about the user. For instance, semantics of the information about the first user may be determined (e.g., information related to movies, TV shows, books, travel may be related to what the first user sees; information related to podcasts and music may be related to what the first user hears; information related to restaurants, food, language may be related to what the first user talks/tastes; information related to perfume may be related to what the first user smells; etc.), semantics of different parts of the digital image may be determined (e.g., eyes are used for seeing, ears are used to hearing, mouth is used for speaking/tasting, nose is used for smelling, etc.), and then one or more tags may be generated at different parts of the digital image that link semantically related information about the first user and parts of the digital image (e.g., information related to what the first user sees may be tagged to the eye(s) in the digital image, information related to what the first user hears may be tagged to the ear(s) in the digital image, information related to what the first user speaks/tastes may be tagged to the mouth in the digital image, information related to what the first user smells may be tagged to the nose in the digital image, etc.). At a later time, a second user may view the digital image of the first user and then be able to interact with the links to easily view information about the first user with semantic context.

In some embodiments, the online platform may be a social media platform. For instance, the first user may have a social media profile on the social media platform. The first user may upload the digital image to the social media profile. In some instances, the digital image is a profile photo. Additionally, information about the first user may be provided to the social media profile. For example, the social media profile may include an “About Me” section including information about preferences and hometown of the first user, which may be displayed separately from the digital image (e.g., in a separate section or on a separate page).

In one embodiment, the information about the user may be provided passively or actively. For instance, the user may actively or manually provide information about themselves by answering questions (e.g., questions regarding preferences, hobbies, and recent activities) or posting on the online platform. The user may passively or automatically provide information about themselves to the online platform by allowing the online platform access to calendar events, location data, browsing history, watch history, and/or the like.

In one embodiment, when a second user interacts with the tags on the digital image on a section of a page of the online platform, the information about the first user associated with the tags is displayed without routing to another section or another page of the online platform.

In some embodiments, the digital image may include subjects other than the first user that may instead, or additionally, be semantically linked to information about the user. For example, the digital image may include locations of interest (e.g., movie theater, zoo, store, sports arena, park, home, and/or the like), animals (e.g., pets, zoo animals, wildlife, etc.), objects (e.g., food, movie posters, sports equipment, etc.). For instance, when the digital image includes a movie theater, the movie theater may be tagged with movies the user has recently seen or liked.

Similarly, when the digital image includes a pet, the pet may be tagged with a favorite place to take the pet (e.g., park, groomer, etc.).

In one embodiment, in addition to, or instead of information about the user being semantically tagged to different parts of the digital image, advertisements related to the information about the user may be semantically tagged to the different parts of the digital image. For instance, if the information about the user indicates that the user has seen a particular movie, and a sequel to the movie is about to be released, an advertisement for the sequel to the movie may be semantically linked to the relevant part of the digital image (e.g., eyes, TV screen, movie theater, etc.). In some instances, the advertisement may be directed to both the first user and the second user. For instance, the advertisement for a sequel may appear when the second user has also indicated that they liked or have seen the same first movie.

In some embodiments, a viewing user may search for information about the user by interacting with a specific area of the digital image. For instance, the viewing user may click on an ear and input or select a question semantically related to the ear (e.g., “What type of music do you like to listen to?”). If information about the user regarding the question (e.g., favorite genre of music, favorite band, recent concerts) has already been provided to the online platform, the relevant information may automatically be provided in response. If the information about the user regarding the question has not already been provided to the online platform, the online platform may prompt the user to provide the information.

In one particular embodiment, a user computing device of a first user is used to upload or send the digital image and, optionally, the information about the first user, to a remote computing system associated with an online platform. A second user may then send a request to the remote computing system via a user computing device (e.g., a user computing device of the second user)

to retrieve the digital image for viewing/interaction. Any combination or order of the methods described herein can be executed on a user computing device(s), remote computing device, or similar.

Detailed Description

FIG. 1 depicts an example computing system 100 in which systems and methods in accordance with the present disclosure can be executed upon. The computing system comprises a user computing device 102 containing one or more processors 112, memory 114 which may contain data 116 and instructions 118 configured to carry out the methods disclosed herein, and a user input component 122. The user input component can be, for example, a touch display or physical buttons within the user computing device 102. The computing system 100 further comprises a network 180 and a server computing system 130. The server computing system 130 may be a server computing system of an online platform (e.g., a social media platform). The server computing system 130 comprises one or more processors 132, and memory 134 which may contain data 136 and instructions 138 configured to carry out the methods disclosed herein. For example, a user may select a digital image via the user input component 122 of the user computing device 102, where the digital image is sent over the network 180 to the server computing system 130. Further, the user may provide information about themselves via the user input component 122 of the user computing device 102 to be sent over the network 180 to the server computing system 130. In some instances, the user may allow information about themselves to additionally, or alternatively, be passively provided by the user computing device 102 (e.g., location data may be generated by a location-based sensor array (e.g., a GPS, a GNSS, etc.) of the user computing device 102, where the location data may be indicative of recent activities of the user) and sent over the network 180 to the server computing system 130. The

server computing system 130 may then store the digital image and the information about the user in memory 134. The instructions 138 stored by the server computing system 130 may instruct the server computing system 130 to semantically tag the digital image based at least in part on the information about the user, as described above. For instance, the server computing system 130 may determine the semantics of the information about the user (e.g., what the user sees, hears, smells, tastes/speaks, etc.), determine the semantics of different parts of the digital image (e.g., eyes are associated with sight, ears are associated with sound, nose is associated with scent, mouth is associated with tasting/speaking, etc.), then tag a particular part of the digital image with information about the user with semantics that match semantics of the particular part of the digital image. The server computing system 130 may allow the online platform to be accessed by other user computing devices of other users for viewing the digital image.

It should be appreciated that any combination or order of systems and methods disclosed herein can be performed on the user computing device(s), server computing system, or similar. For example, all processes can be performed on the user computing device(s) 102 or the server computing system 130.

FIGS. 2 and 3 depict an example embodiment according to aspects of the present disclosure. The example embodiment comprises a user computing device 202 such as, for example, a smartphone, which comprises a user input component 204 via which a user may view and interact with the online platform. For instance, the user may view a social media profile 206 of another (profiled) user, which includes a digital image uploaded to the online platform by the profiled user. In the illustrated embodiment, the digital image is of the profiled user. However, it should be appreciated that any other suitable subject may be depicted in the digital image.

The user of the user computing device 202 may want to learn more about the profiled user without navigating to the “About” section of the profile 210, as such the user may hover over or click different parts of the digital image of the profiled user to learn more. For instance, as particularly shown in FIG. 3, when a user clicks on the ear of the profiled user in the digital image, an information tag 300a related to what the user listens to is displayed (e.g., a favorite band, most recent concert attended), when a user clicks on the mouth of the profiled user in the digital image, an information tag 300b related to what the user tastes/speaks is displayed (e.g., favorite snack, languages spoken), when a user clicks on the nose of the profiled user in the digital image, an information tag 300c related to what the user smells is displayed (e.g., favorite cologne/perfume), when a user clicks on the eyes of the profiled user in the digital image, an information tag 300d related to what the user sees is displayed (e.g., favorite movie, recently watched, etc.). While all of the information tags 300a-300d about the user are illustrated as being displayed simultaneously in FIG. 3, it should be appreciated that, in some instances, only the information tag currently selected is shown, or only the information tags selected during a visit are shown, and/or the like. Further, while the information tags 300a-300d are shown as being overlaid over the digital image and the profile 206, it should be appreciated that the information tags 300a-300d may be presented in any other suitable manner.

Figures

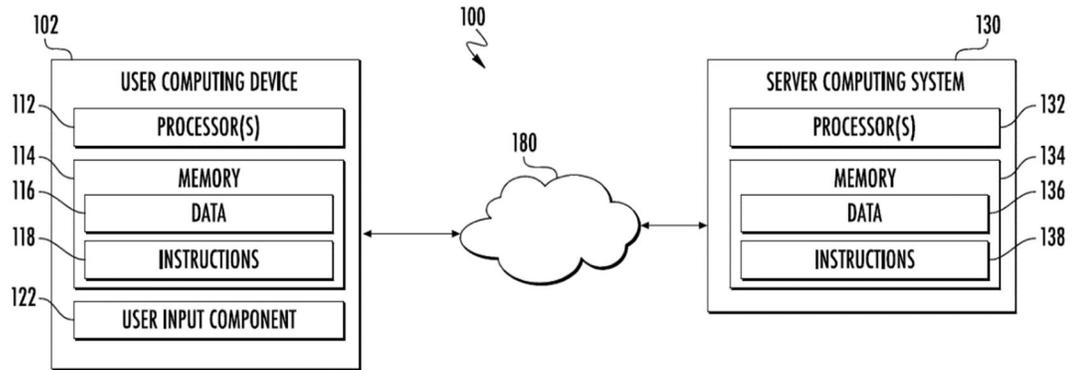


FIG. 1

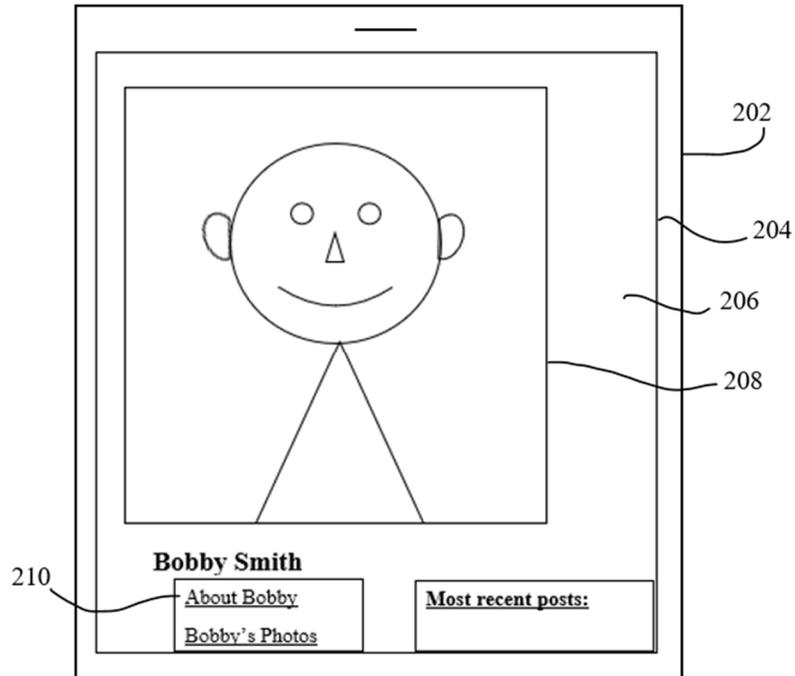


FIG. 2

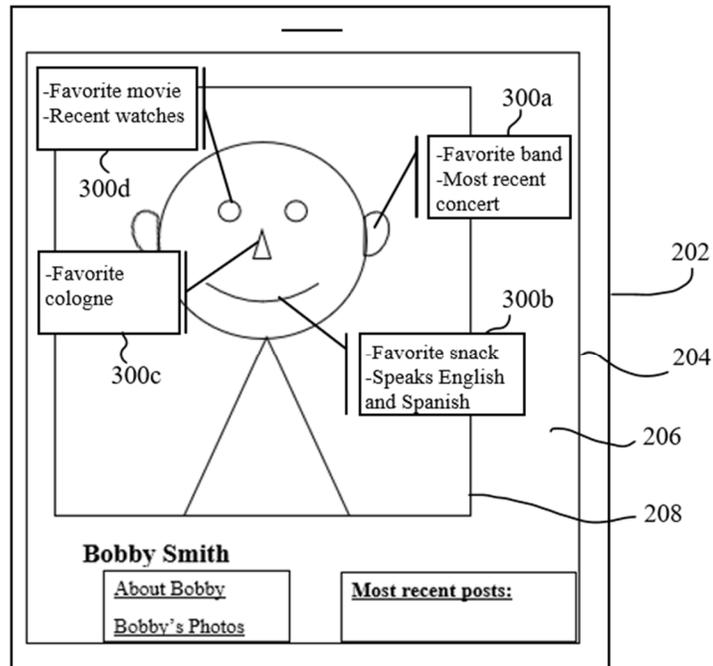


FIG. 3

Abstract

The present disclosure describes computer-implemented systems and methods for semantically tagging digital images (e.g., profile photos) uploaded by a user based on information about the user. A viewing user may interact with the semantically tagged digital images to learn more about the user that uploaded the digital image without having to navigate away from the digital image.