

CLAIMS

1. A mobile device comprising:
- computer-executable instructions stored in one or more memories and
- 5 executable by one or more processors to:
- store a plurality of images in an image repository of the one or more memories;
- produce a small-scale model of a particular image of the plurality of images, the small-scale model including an indicia associated with the
- 10 particular image;
- transmit the small-scale model to a remote computing device via a network interface;
- receive a packet, from the remote computing device, including the indicia and a list of tags that correspond to the small-scale model, the list of tags including at least one or more tags corresponding to a location, a
- 15 time of day, a scene type, a facial recognition, or an emotional expression recognition;
- extract the indicia and the list of tags from the packet;
- create and store a record in a database of the one or more
- 20 memories associating the list of tags with the image corresponding to the indicia;
- present a search screen on a display;
- accept a search string through the search screen;
- submit the search string to a natural language parser stored in
- 25 the one or more memories;
- produce, via the natural language parser, a list of categories based on the search string;
- query the database based on the list of categories;
- receive a list of images based on the query; and
- 30 present the list of images on the display.

2. The mobile device of claim 1, wherein the natural language parser returns a sorted list of categories, the list of categories sorted by a distance metric.

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3. The mobile device of claim 1 or 2, wherein the mobile device comprises one or more of a smartphone, tablet computer, or wearable computer.

4. The mobile device of any one of the preceding claims, wherein the one or more memories comprises one or more of a FLASH memory, or an SD memory card.

5. The mobile device of any one of the preceding claims, wherein the network interface comprises one or more of a wireless network interface, an 802.11 wireless network interface, or a cellular radio interface.

6. The mobile device of any one of the preceding claims, wherein the database comprises one or more of a relational database, an object oriented database, a NO SQL database, or a New SQL database.

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7. The mobile device of any one of the preceding claims, wherein the small-scale model comprises a thumbnail of an image.

8. The mobile device of any one of the preceding claims, wherein one or more of the plurality of images is received from a Uniform Resource Locator (URL) corresponding to an image stored by a third-party web service.

9. A system comprising:
computer-executable instructions stored in one or more memories and executable by one or more processors to:

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receive, via a network interface, a small-scale model of a particular image of a plurality of images stored on a mobile computing device, the small-scale model including an indicia associated with the particular image;

5 generate a list of tags that correspond to the small-scale model, the list of tags including at least one or more tags corresponding to a location, a time of day, a scene type, a facial recognition, or an emotional expression recognition; and

10 send, to the mobile computing device via the network interface, a packet including the indicia and the list of tags that correspond to the small-scale model; and

 a mobile computing device application, configured for execution by the mobile computing device, storing the list of tags and providing a natural language parser to receive search string queries that
15 correspond to the list of generated tags.

10. The system of claim 9, wherein the natural language parser returns a sorted list of categories, the list of categories sorted by a distance metric.

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11. The system of claim 9 or 10, wherein the mobile computing device comprises at least one of a smartphone, tablet computer, or wearable computer.

12. The system of any one of claims 9 to 11, wherein the one or more
25 memories comprise at least one of a FLASH memory, or an SD card.

13. The system of any one of claims 9 to 12, wherein the network interface comprises at least one of a wireless network interface, an 802.11 wireless network interface, or a cellular radio interface.

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14. The system of any one of claims 9 to 13, wherein the database comprises at least one of a relational database, an object oriented database, a NO SQL database, or a New SQL database.

5 15. The system of any one of claims 9 to 14, further comprising, prior to generating the list of tags, receiving one or more recognition training models comprising at least a training video clip or a plurality of training images.

10 16. The system of any one of claims 9 to 15, further comprising a determination to generate the list of tags, the determination being based at least in part on recognizing a CPU load requirement associated with generating the list of tags.

15 17. The system of any one of claims 9 to 16, further comprising, prior to generating the list of tags, extracting one or more local binary pattern features corresponding to one or more facial features from a set of training images.

20 18. The system of claim 17, further comprising, prior to generating the list of tags, generating, from the one or more local binary pattern features a first training model corresponding to the presence of a facial feature and a second training model corresponding to the absence of the facial feature.

25 19. The system of claim 17 or 18, wherein the one or more facial features comprise one or more of a middle point between eyes, a middle point of a face, a nose, a mouth, a cheek, or a jaw.

30 20. The system of any one of claims 17 to 19, wherein generating the list of tags further comprises determining a first position of a first facial feature and determining a second position of a second facial feature, and comparing a

distance between the first position and the second position to a predetermined relative distance.

21. The system of any one of claims 9 to 20, further comprising, prior
5 to generating the list of tags, creating a rectangular window comprising a portion of the small-scale model, and basing the list of tags on one or more pixels located within the rectangular window.

22. The system of claim 21, wherein the rectangular window is
10 defined based, at least in part, on a location of an identified facial feature in the small-scale model.

23. The system of claim 21 or 22, wherein the rectangular window
comprises dimensions of about 100 pixels by about 100 pixels.

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24. A method comprising:
computer-executable instructions stored in one or more memories and
executable by one or more processors to:

store one or more images in an image repository of the one or
20 more memories;

produce a small-scale model of a particular image of the one or
more images, the small-scale model including an indicia associated with
the particular image;

transmit, via a network interface, the small-scale model to a
25 remote computing device;

receive, from the remote computing device, a packet including
the indicia and a list of tags generated at the remote computing
device that correspond to the small-scale model, the list of tags
including at least one or more tags corresponding to a location, a time

of day, a scene type, a facial recognition, or an emotional expression recognition;

extract the indicia and the list of tags from the packet;

5 create and store a record in a database of the one or more memories associating the list of tags with the image corresponding to the indicia;

present a search screen on a display;

accept a search string through the search screen;

10 submit the search string to a natural language parser stored in the one or more memories;

produce, via the natural language parser, a list of categories based on the search string;

query the database based on the list of categories;

receive a list of images based on the query; and

15 present the list of images on the display.