Claims

1. A computing device comprising one or more processing units to:

   receive a first image from an image source, the image comprising an artefact of interest;

   process the first image to generate one or more image evaluation metrics, wherein the one or more image evaluation metrics are approximations of image quality metrics, and are determined by executing deep neural networks based condensed image processing models that are approximations for full-scale computations required to generate the image quality metrics and are configured to process a fixed number of image-related parameters;

   process the one or more image evaluation metrics to determine a degree of clarity of the artefact of interest in the first image;

   when the degree of clarity is below a predefined threshold, identify a region within the first image contributing to the degree of clarity being below the predefined threshold and generate a feedback message based on the one or more image evaluation metrics; and

   cause presentation of the feedback message on a display in communication with the one or more processing units and presentation of the first image visually indicating the identified region on the display.

2. The computing device of claim 1, wherein the fixed number of image-related parameters are image-related parameters that have a greatest contribution to assessing the respective image evaluation metric.

3. The computing device of claim 1 or claim 2, wherein the image quality metrics comprise any one of: blur score, dark/light score, BRISQUE (Blind/Referenceless Image Spatial Quality Evaluator) score, NIQE (Naturalness Image Quality Evaluator) score, pixel width score or total variance score.

4. The computing device of any one of claims 1 to 3, wherein the artefact of interest comprises any one of: a face, an identity card, a document or a photograph.
5. The computing device of any one of claims 1 to 4, wherein the one or more condensed image processing models generate the one or more image evaluation metrics in real-time or near real-time.
6. The computing device of any one of claims 1 to 5, wherein the one or more condensed image processing models generate the one or more image evaluation metrics without invoking compute resources remote to the computing device.
7. The computing device of any one of claims 1 to 6, wherein the computing device is an end user computing device.
8. The computing device of any one of claims 1 to 7 wherein the one or more processing units further:

   receive a second image with the artefact of interest;

   perform object detection or text recognition operations on the second image.
9. A computer-implemented method for image evaluation, comprising:

   receiving a first image from an image source, the image comprising an artefact of interest;

   processing the first image to generate one or more image evaluation metrics by executing respective one or more condensed image processing models, wherein the one or more image evaluation metrics are approximations of image quality metrics, and are determined by executing deep neural networks based condensed image processing models that are approximations for full-scale computations required to generate the image quality metrics and are configured to process a fixed number of image-related parameters;

   processing the one or more image evaluation metrics to determine a degree of clarity of the artefact of interest in the first image;

when the degree of clarity is below a predefined threshold, identifying a region within the first image contributing to the degree of clarity being below the predefined threshold and generating a feedback message based on the one or more image evaluation metrics; and

causing presentation of the feedback message on a display and presentation of the first image visually indicating the identified region on the display in combination with the feedback message.

10. The method of claim 9, wherein the fixed number of image-related parameters are image-related parameters that have a greatest contribution to assessing the respective image evaluation metric.
11. The method of claim 9 or claim 10, wherein the image quality metrics comprise any one of: blur score, dark/light score, BRISQUE (Blind/Referenceless Image Spatial Quality Evaluator) score, NIQE (Naturalness Image Quality Evaluator) score, pixel width score and total variance score.
12. The method of any one of claims 9 to 11, wherein the artefact of interest comprises any one of: a face, an identity card, a document or a photograph.
13. The method of any one of claims 9 to 12, wherein the one or more condensed image processing models generate the one or more image evaluation metrics in real-time or near real-time.
14. The method of any one of claims 9 to 13, wherein the one or more condensed image processing models generate the one or more image evaluation metrics without invoking compute resources remote to the computing device.
15. The method of any one of claims 9 to 14, wherein the method is executed by an end user computing device.
16. The method of any one of claims 9 to 15 further comprising:

receiving a second image with the artefact of interest;

performing object detection or text recognition operations on the second image.

17. A server system comprising one or more processing units to:

transmit to a computing device program code executable by the computing device to perform the method of any one of claims 9 to 16.

18. One or more non-transitory computer-readable storage media storing instructions that when executed by one or more processing units to:

receive a first image from an image source, the image comprising an artefact of interest;

process the first image to generate one or more image evaluation metrics by executing respective one or more condensed image processing models, wherein the one or more image evaluation metrics are approximations of image quality metrics, and are determined by executing deep neural networks based condensed image processing models that are approximations for full-scale computations required to generate the image quality metrics and are configured to process a fixed number of image-related parameters;

process the one or more evaluation metrics to determine a degree of clarity of the artefact of interest in the first image;

when the degree of clarity is below a predefined threshold, identify a region within the first image contributing to the degree of clarity being below the predefined threshold and generate a feedback message based on a one or more of image evaluation metrics; and

cause presentation of the feedback message on a display in communication with the one or more processing units and presentation of the first image visually indicating the identified region on the display.

19. The one or more non-transitory computer-readable storage media of claim 18, wherein the fixed number of image-related parameters are image-related parameters that have a greatest contribution to assessing the respective image evaluation metric.