CLAIMS

1. A computer-implemented method for generation of a vehicle repair plan, the method being executed by one or more processors and comprising:

receiving, by the one or more processors, vehicle damage data comprising at least an image of a damaged vehicle that has a plurality of damaged parts;

determining (i) a particular damaged part of the damaged vehicle, and (ii) a damage type of the particular damaged part of the damaged vehicle, comprising:

inputting, by the one or more processors, the image of the damaged vehicle into a neural network model that is trained based on a machine-learning algorithm; and

obtaining, by the one or more processors, data identifying (i) the plurality of damaged parts that the neural network model indicates are each damaged, and, (ii) for each of the plurality of damaged parts, a damage type associated with the damaged part;

determining that the damage type of the particular damaged part reflects a highest degree of damage among the respective damage types of the plurality of damaged parts that the neural network model indicates are each damaged, and, in response, selecting, from among the plurality of damaged parts that the neural network model indicates are each damaged, the particular damaged part of the damaged vehicle for generation of a repair plan;

generating, by the one or more processors, the repair plan for the damaged vehicle based on the particular damaged part, and the damage type associated with a particular region of the image; and

initiating, by the one or more processors, the repair plan for the damaged vehicle.

2. The computer-implemented method of claim 1, wherein the repair plan comprises an estimated repair cost corresponding to the particular damaged part and the damage type.

3. The computer-implemented method of claim 1, wherein the machine-learning algorithm comprises one or more of a convolutional neural network or a region proposal network.

4. The computer-implemented method of claim 1, further comprising ranking the plurality of damaged parts based on a severity of respective damage type.

5. The computer-implemented method of claim 1, wherein the image is processed to delete features that are irrelevant for damage identification.

6. The computer-implemented method of claim 1, wherein the plurality of damaged parts and the damage type associated with each damaged part are determined based on an analysis of multiple images of the damaged vehicle that were taken from different perspectives.

7. A system, comprising:

one or more processors; and

a computer-readable storage device coupled to the one or more processors and having instructions stored thereon which, when executed by the one or more processors, cause the one or more processors to perform operations for generation of a vehicle repair plan according to the method of any one of claims 1 to 6.

8. A non-transitory computer-readable storage medium coupled to one or more processors and having instructions stored thereon which, when executed by the one or more processors, cause the one or more processors to perform operations for generation of a vehicle repair plan according to the method of any one of claims 1 to 6.