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(54) Title: MACHINE LEARNING TECHNIQUES FOR COMPONENT-BASED IMAGE PREPROCESSING

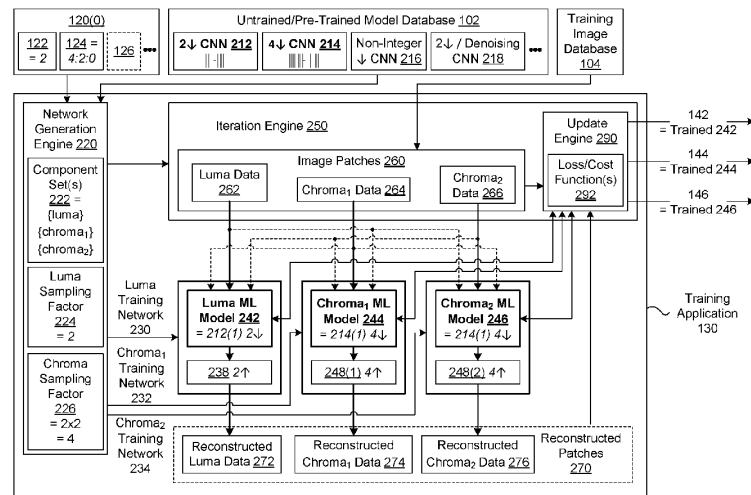


FIGURE 2

(57) Abstract: In various embodiments, a training application trains a machine learning model to preprocess images. In operation, the training application computes a chroma sampling factor based on a downscaling factor and a chroma subsampling ratio. The training application executes a machine learning model that is associated with the chroma sampling factor on data that corresponds to both an image and a first chroma component to generate preprocessed data corresponding to the first chroma component. Based on the preprocessed data, the training application updates at least one parameter of the machine learning model to generate a trained machine learning model that is associated with the first chroma component.

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