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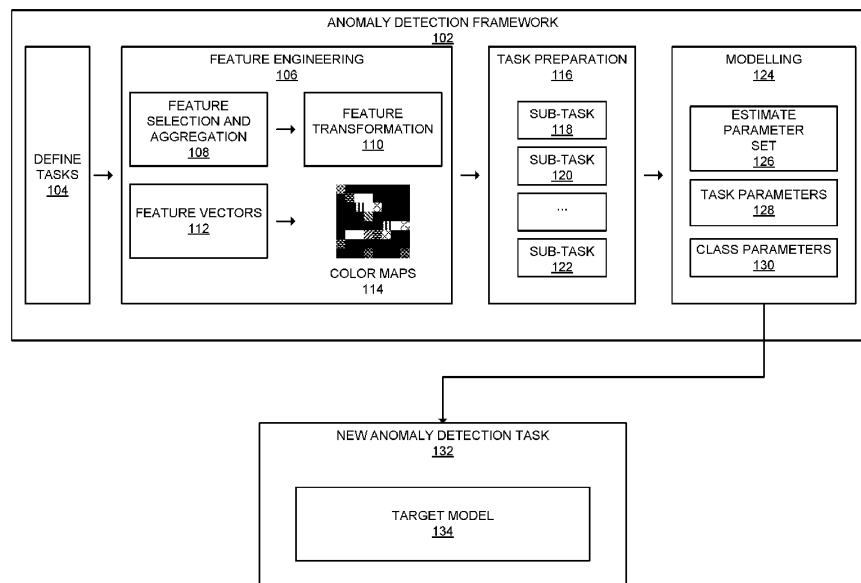


FIG. 1

(57) Abstract: Methods and systems for quickly and accurately training machine learning models to perform tasks related to new contexts are disclosed, particularly new contexts for which there is little available training data. One or more source data sets can be divided into a plurality of source sub-sets, which can be used to train a plurality of source sub-models. From this plurality of source sub-models, an estimate parameter set can be determined. The estimate parameter set and a target data set (which may comprise a comparatively small number of data elements) can be used to train a target model to perform some task. In this way, the source data set can be leveraged to train the target model. Additionally disclosed is a novel method of generating color maps, image representations of non-image data. These color maps can be used to train the sub-models and target model, improving model performance.

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