

ABSTRACT

Systems, methods, and computer program products are provided for generating and improving multitask learning models. An example method includes determining a first accuracy metric based on at least two machine learning models performing a plurality of tasks, receiving a multitask learning model including at least one shared layer and a plurality of task-specific layers, determining a second accuracy metric based on the multitask learning model having a first number of shared layers, determining a third accuracy metric based on the multitask learning model having a second number of shared layers, comparing the accuracy metrics, repeating until at least one termination condition is satisfied, and determining a target number of shared layers for the multitask learning model based on at least one of the second accuracy metric, the third accuracy metric, the first number of shared layers, the second number of shared layers, or any combination thereof.

<FIG. 5C>