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(54) **Title:** OPTIMAL INTERPRETABLE DECISION TREES USING INTEGER PROGRAMMING TECHNIQUES

(57) **Abstract:** Aspects of the invention include an optimal interpretable decision tree using integer linear programming techniques. A non-limiting example computer-implemented method includes receiving, using a processor, a plurality of data inputs from a process and selecting, using the processor, a data subset from the plurality of data inputs by solving linear programming to obtain a solution. The method builds and optimizes, using the processor, an optimal decision tree based on the data subset and alerts, using the processor, a user when a prediction of the optimal decision tree is greater than a threshold value.

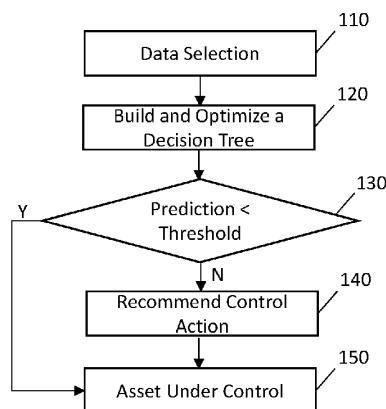


FIG. 1

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