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(54) Title: BED HAVING FEATURES FOR DETERMINATION OF RESPIRATORY DISEASE CLASSIFICATION

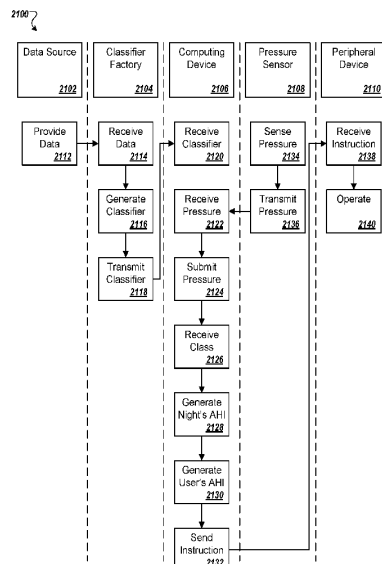


FIG. 21

(57) Abstract: Data related to breathing action of a person on a bed is received. Tagging data that defines tags of disease state for the respiratory data is received. A respiratory-disease classifier is generated using respiratory cardiac data and the tagging data, the generating may include: training a convolutional neural network (CNN) configured to use as input i) the respiratory data and ii) the tagging data, the CNN configured to generate intermediate data; and training a recurrent neural network (RNN) configured to use as input the intermediate data, the RNN configured to generate a disease classification, the RNN may include i) a prospective long short-term memory (LSTM) network using as input later disease classifications and ii) a historic LSTM network using as input previous disease classifications.

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