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(57) Abstract :
The present invention discloses a machine learning model (100) for predictive maintenance in manufacturing. The model includes a data acquisition unit (101) for collecting real-time sensor data, a preprocessing module (102) for noise removal, and a feature extraction unit (103) for generating informative features. A learning model (104) predicts equipment failures, while a prediction engine (105) estimates Remaining Useful Life (RUL). A visualization interface (106) displays predictive insights, enabling proactive maintenance scheduling. The invention reduces downtime, lowers costs, and improves manufacturing reliability.

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