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(57) Abstract :

A machine learning framework for autonomous system self-healing is disclosed. The framework includes a telemetry ingestion module (101), a normalization and context module (102), a health state modeling engine (103), a fault diagnosis engine (104), a remediation policy engine (105), an orchestration controller (106), a verification module (107), and a feedback learning module (108) coupled with managed system resources (109). The framework detects degradation, determines probable fault causation, selects policy-compliant corrective actions, executes staged remediation, verifies recovery, and continuously updates learned healing behavior from operational outcomes.

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