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(57) Abstract :

The present invention discloses a modular fault-injection framework (101) for autonomous debugging in legacy systems (102). The system integrates a runtime hooking module (103), simulated fault modules (104), a behavior monitoring unit (105), and an adaptive correction engine (106) to facilitate non-intrusive fault detection, classification, and remediation. The framework minimizes downtime, requires no source code access, and employs rollback mechanisms to ensure operational stability.

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