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(51) International classification	:G06N 20/00, G06K 9/62, G06N 3/08, G06N 5/04, G06N 20/20	(71)Name of Applicant : 1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
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(57) Abstract :

A machine learning model for dynamic anomaly detection is disclosed. The model comprises a data acquisition interface (101), a preprocessing and feature normalization module (102), a temporal context encoder (103), an adaptive baseline engine (104), an anomaly scoring unit (105), a context fusion module (106), a decision controller (107), and a feedback calibration unit (108). Incoming observations are transformed into contextual representations, compared with context-specific reference profiles, scored for anomalous deviation, and classified using adaptive decision boundaries. The model supports evolving data environments with improved detection relevance and reduced false alerts.

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