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(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. -----  
**Name of Applicant : NA**  
**Address of Applicant : NA**

(72)**Name of Inventor :**  
**1)NIDHI SHARMA**  
 Address of Applicant :Department of Computer Science & Engineering (DS), Noida Institute of Engineering & Technology, Greater Noida. Greater Noida -----  
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(57) Abstract :  
 An AutoML-integrated data preprocessing optimizer for dynamic model tuning comprises a data analyzer (101), preprocessing repository (102), optimization engine (103), model evaluator (104), and feedback controller (105). The system dynamically adjusts preprocessing pipelines based on real-time model performance, data characteristics, and evolving metrics. It enhances model accuracy, reduces convergence time, and ensures robustness to data drift through continuous optimization of preprocessing strategies.

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