

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202511106993 A

(19) INDIA

(22) Date of filing of Application :05/11/2025

(43) Publication Date : 26/12/2025

(54) Title of the invention : A COMPUTER-AIDED MODEL FOR OPTIMIZED DISTRIBUTED DATABASE PERFORMANCE

(51) International classification	:B60L 58/22, H03F 1/06, H03C 1/54, G06F 16/2452, G06F 16/2453	(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 (72) Name of Inventor : 1)GARIMA JAIN 2)BANDANA KUMARI
(31) Priority Document No	:NA	
(32) Priority Date	:NA	
(33) Name of priority country	:NA	
(86) International Application No	:	
Filing Date	:01/01/1900	
(87) International Publication No	: NA	
(61) Patent of Addition to Application Number	:NA	
Filing Date	:NA	
(62) Divisional to Application Number	:NA	
Filing Date	:NA	

(57) Abstract :

The present invention discloses a computer-aided model for optimized distributed database performance. The system integrates a query optimizer (101), workload balancer (102), resource manager (103), monitoring unit (104), and predictive analyzer (105). These modules collaboratively enhance query efficiency, balance workloads, manage resources adaptively, and predict workload surges. By ensuring consistency, reliability, and scalability, the invention significantly reduces latency, improves throughput, and optimizes resource utilization in distributed environments. The model offers a unified framework for real-time, intelligent management of distributed database systems.

No. of Pages : 15 No. of Claims : 6