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(57) Abstract :
DYNAMIC SCALABLE GRAPH DATA INTEGRATION AND QUERY MANAGEMENT SYSTEM LEVERAGING ADVANCED ANALYTICS FOR COMPLEX DATASETS ABSTRACT The invention provides a dynamic scalable graph data integration and query management system (100) for complex datasets. The system comprises a graph-based data integration module (110) that dynamically integrates disparate data sources into a unified graph structure, utilizing advanced analytics to manage data variability and schema heterogeneity. A query management engine (112) processes and executes complex queries on this structure, employing advanced analytical techniques to optimize performance. The analytics optimization layer (114) analyzes query execution patterns and adjusts strategies for improved scalability. A user interface module (116) offers an intuitive platform for query formulation and result visualization. Additionally, a data synchronization subsystem (118) ensures real-time consistency across multiple data sources through dynamic updating mechanisms. This system enhances data integration and query management by leveraging advanced analytics and dynamic adjustments to handle complex, heterogeneous datasets efficiently. FIG. 1

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