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Subarna Chatterjee (Datastax)
Subhadeep Sarkar (Brandeis University)
Sujaya Maiyya (University of Waterloo)
Supawit Chockchowwat (University of Illinois Urbana-Champaign)
Theodore Johnson (AT&T Labs - Research)
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Yuxin Tang (Rice University)
Zhe Jiang (University of Florida)
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LETTER FROM THE EDITORS IN CHIEF

We are pleased to present the fifth issue of Volume 19 of the Proceedings of the VLDB Endowment (PVLDB).

This fifth issue of Volume 19 includes 21 papers spanning the following primary subject areas: Data Mining and Analytics (2); Database Engines (5); Database Performance and Manageability (1); Graph and Network Data (1); Machine Learning, AI, and Databases (6); Novel Database Architectures (4); and Specialized and Domain-Specific Data Management (2). Together, these papers represent a broad and diverse cross-section of the areas addressed by PVLDB.

This issue reflects several research directions that are actively reshaping the data management landscape. A particularly prominent theme is the growing interaction between data systems and LLM-based agents. Beyond their immediate role in NL2SQL or model fine-tuning, such agents are increasingly transforming how users search the web, interact with documents and code bases, automate business processes, and access both structured and unstructured data. It is therefore encouraging to see the research community engaging with this shift in a principled way, through work on LLM agents for data processing, benchmarking frameworks for NL2SQL, dataset search in the era of LLMs, vector storage for long-context inference, KV-cache reconfiguration, and cost-based optimization for semantic operator systems. Together, these contributions highlight the growing role of data management as a foundation for the next generation of agentic and AI-driven applications.

At the same time, this issue underscores that such higher-level capabilities depend critically on continued advances in efficient foundational systems. Several papers contribute along this dimension, including work on key-value storage over disaggregated storage, learned indexes and static-function data structures, workload-driven LSM compaction, floating-point compression, efficient join enumeration, dynamic graph representations, sequential pattern matching, and CPU-GPU co-processing for large-scale vector search.

Another notable aspect of the issue is its emphasis on methodological rigor, with contributions addressing fairness, benchmark quality, annotation errors, and parameter sensitivity estimation.

Overall, this issue presents a compelling combination of forward-looking work on agentic and LLM-enabled data interaction, together with the systems and evaluation foundations needed to support both traditional and emerging data management workloads in a principled and scalable manner.

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