Proceedings of the VLDB Endowment

Volume 18, No. 8 – April 2025

PVLDB – Proceedings of the VLDB Endowment

Volume 18, No. 8, March 2025.

All papers published in this issue will be presented at the 51st International Conference on Very Large Data Bases, London, United Kingdom, 2025.

Volume 18, Number 8, April 2025

Pages i – ix and 2308-2760

ISSN 2150-8097

Available at: http://www.pvldb.org and https://dl.acm.org/journal/pvldb

TABLE OF CONTENTS

Front Matter

Research Papers

LETTER FROM THE EDITORS IN CHIEF

We are pleased to present the eighth (April 2025) issue of PVLDB Volume 18, which contains 34 papers from 3 categories: Scalable Data Science (3), Experiment, Analysis & Benchmark (3), and Regular Research (28).

These papers cover a diverse collection of primary subject areas, including: Database Engines (9); Data Mining and Analytics (7); Machine Learning, AI, and Databases (6); Information Integration and Data Quality (5); Distributed Database Systems (2); User Interfaces (2); Novel Database Architectures (1); Provenance and Workflows (1); and Specialized and Domain-Specific Data Management (1).

In this letter, we would like to highlight the Vision category of PVLDB's research track, which targets papers that outline futuristic information systems and architectures or anticipate new challenges. These submissions describe novel projects that are in an early stage but hold out the strong promise of eventual high impact. The focus is on the key insight behind the project (e.g., a new set of ground rules or a novel technology), as well as explaining how the key insight can be leveraged in building a system along with a description of the success criteria.

In Volume 18, we reviewed a total of 28 Vision submissions to the PVLDB research track, 4 of which have been accepted to date and 2 still awaiting decision. These papers present a variety of novel topics, including: knowledge graph management for heterogeneous data integration, data management for quantum computing, semantic integrity constraints for building reliable AI-augmented data systems, graph databases with causal reasoning capabilities, and more.

Different from previous years, each Volume 18 research paper category, including Vision, was handled by dedicated Associate Editors who ensured consistent reviewing criteria as required by that category. For Vision submissions, this included using specialized reviewer guidelines that emphasize the stronger novelty expectations when assessing technical depth and quality of content, during both reviewing and discussion phases.

We are grateful to our board of associate editors and reviewers as well as proceedings chairs for their dedicated service that made this issue possible, with special thanks to our associate editors overseeing the Vision category.

H. V. Jagadish and Tamer Ozsu
Associate Editors for the Vision Paper Category

Themis Palpanas and Nesime Tatbul
Editors-in-Chief of PVLDB Vol. 18
Program Chairs for VLDB 2025