Letter from the Editor-in-Chief

Curated by Sudeepta Roy and Jun Yang, the latest issue of the Bulletin focuses on an unusual topic: education and tools for data management practitioners. This topic typically does not receive a lot of attention, although its significance has increased dramatically as the impact of data engineering has grown. This issue fills the gap. For instance, Chandra and Sudarshan introduced a system that supports students in learning SQL in the first article of the issue. We were aware for many years that SQL could be difficult to use. But previously, SQL was mostly used by a small number of database administrators or data management engineers. Today, with the rise of data science, SQL is used by business analysts, data engineers, data scientists, software developers, machine learning engineers, and virtually anybody else whose work requires access to data. In addition, SQL queries have become sophisticated and difficult to interpret, and improper use of SQL can not only lead to inaccurate results but also incur exorbitant data warehouse expenditures. It is therefore essential that we comprehend the obstacles and prepare ourselves and the field properly.

This issue also includes an opinion piece titled "A bird's eye view of the fourth industrial revolution" by Kyu-Young Whang et al. Although the concept of the fourth industrial revolution (4IR) is not new, the post-Covid world and the new technologies that have emerged in response to this new world have given the term a new meaning. The article by Kyu-Young Whang et al. provides a timely assessment of the prospects and obstacles in this field based on an informative categorization of 4IR technologies.

I would like to congratulate Joy Arulraj from Georgia Tech. and Leilani Battle from Univ. of Washington for winning the 2022 IEEE TCDE Award. Arulraj receives the Rising Star Award for his contributions to the design of query processing engines for non-volatile memory and video database systems. Battle receives the Rising Star Award for her interactive data-intensive systems for exploratory data analysis. The letters shared their experience and their perspectives.

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