Letter from the Special Issue Editor

In recent years, social platforms have evolved from niche communities into critical infrastructures that shape how individuals communicate, form opinions, and interact with the world. This transformation has led to an unprecedented volume of user-generated content and social interaction data, opening up new challenges and opportunities at the intersection of data engineering and social computing. With this backdrop, the current special issue brings together six invited articles that highlight recent advances in mining, modeling, and understanding social behavior from a data-centric perspective.

The issue begins with a conceptual bridge between social psychology and graph-based data analysis. The first paper, "A Tale of Two Cohesion: A Review of Group Cohesion in Social Psychology and Social Computing" by Zhao et al., revisits the long-standing notion of group cohesion, examining its interpretations in social psychology and tracing its algorithmic counterparts in graph mining. This cross-disciplinary perspective lays a foundation for the papers that follow, each of which addresses a concrete computational problem rooted in social interactions.

Building on this foundation, the next paper, "Community Search: A Survey of the State-of-the-Art from Algorithms to Learning, Complex Graphs, and Interaction" by Sun and Huang, surveys recent developments in community search. It charts the evolution of this task from early structural approaches to more expressive models that account for attributes, dynamics, and user interaction. The survey also offers a forward-looking view on how machine learning, and more recently, large language models, may further shape this area.

The third article, "Detection, Measurement, and Mitigation of Echo Chambers in Social Networks: A Survey" by Zhu et al., shifts the focus to the dynamics of social behavior, particularly the phenomenon of echo chambers. It offers a comprehensive taxonomy of approaches to detect and measure echo chambers, as well as strategies for mitigating their effects. By combining network structure with semantic cues, the authors provide insight into one of the most debated effects of social media on public discourse.

Misinformation is another pressing concern in social networks. The fourth article, "A Survey on False Information Detection: From A Perspective of Propagation on Social Networks" by Xie and Wang, surveys techniques for detecting false information by focusing on how it propagates. Rather than relying purely on content or user-level signals, this perspective emphasizes the structure and evolution of information cascades. The survey covers both homogeneous and cross-platform propagation and outlines emerging directions for robust, early detection.

The remaining two papers explore applications that leverage these analytical insights in real-world systems. The fifth paper, "Lightweight Influence-Aware News Recommendation in Social Media" by Feng and Cautis, introduces a lightweight, influence-aware news recommendation system tailored to the demands of social media platforms. The proposed approach integrates diffusion modeling with efficient content filtering, offering a practical balance between relevance and scalability. The final article, "Kandinsky Meets Social Conversation: Towards Abstract Art-Inspired Visualization Abstraction for Mobile Devices" by Gumtang, Tham, and Bhowmick, takes a visual and interaction-oriented turn, proposing a novel abstraction inspired by abstract art for visualizing social conversations on mobile devices. By emphasizing clarity and aesthetic simplicity, the system illustrates how data-engineering techniques can be rendered accessible to everyday users.

Collectively, the articles in this issue showcase the breadth and depth of research at the intersection of data engineering and social computing. They span foundational theory, algorithmic development, system design, and real-world applications, demonstrating how data-centric methods can yield insight into complex social phenomena and, ultimately, inform the design of more effective and responsible technologies.

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