

## — Special Section on Data Engineering and Information Management —

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The Institute of Electronics, Information and Communication Engineers (IEICE) announces a forthcoming special section on "Data Engineering and Information Management", which is published in Transactions on Information and Systems\*. We invite submissions of original and unpublished papers in the field of wide range of the title.

### 1. Scope

Original papers on both theoretical and practical data engineering and information management, and its related research are welcome to this special section. The topics of interest include, but are not limited to the following:

- *Natural Language Processing & Machine Learning Foundations:*
  - *Large Language Models (LLM), Text Classification, Text Mining, Explainable AI (XAI), Interpretable ML, Information Extraction, Machine Translation, Question Answering, Dialogue Systems, Document Summarization, Language Models, Syntactic Analysis, Semantic Analysis, Applications of NLP, General Machine Learning Techniques, Learning Theory.*
- *Big Data Infrastructure, Data Security & Privacy:*
  - *Databases: Query Processing, Query Languages, Storage Management, Query Optimization, In-Memory Data Management, Tuning & Performance Management, Data Lakes & Schema on Read, Transaction Processing, Fault Recovery, Database Technologies, Cloud Infrastructure, NoSQL Databases, Graph Databases, Data Integration Techniques.*
  - *Algorithms: Stream Data Processing, Graph Data Processing, Semi-Structured Data Processing, Spatial & Spatio-Temporal Data Processing, Probabilistic Data Processing, Data Structures & Indexing, Advanced Hardware Utilization & GPUs, Parallel & Distributed Processing, Real-Time & Reactive Processing, Knowledge Graphs & Ontology Processing.*
  - *Security & Privacy: Homomorphic Encryption, Privacy, Machine Learning and Privacy.*
- *Information Retrieval, Recommendation Systems & Social Media:*
  - *Search Models (Learning to Rank, Language Models, Diversification), Recommendation Models (Collaborative Filtering, Matrix Factorization, Content-Based Recommendations, Knowledge-Based Recommendations, Hybrid Recommendations), Recommendation Tasks (Session-Based Recommendations, Sequential Recommendations, Cross-Domain Recommendations, POI Recommendations, Group Recommendations), Search Queries (Intent Understanding, Query Recommendations, Query Autocompletion, Voice Queries), Efficiency & Scalability, User Models & Behavior Analysis, Interfaces & Interactions, Context Awareness & Personalization, Evaluation & Datasets, Beyond Accuracy (Novelty, Diversity, Serendipity, Trustworthiness), Social Media (SNS, Microblogs, Reviews, News, Communities), Conversational Search & Recommendation Systems, Privacy, Explainability, Fairness & Bias, Library Information, Information Organization, Information Seeking Behavior.*
- *Media Processing & HCI, Human-Centered Information Management:*
  - *Image Recognition, Video Analysis, Audio & Music, Signal Processing, Multimedia, Behavior Analysis, Recipes & Cooking, Pattern Recognition.*
  - *UI/UX, User Understanding, User Support, Information Visualization, Interactive Systems, XR (VR/AR/MR), Accessibility.*
  - *Human Computation, Crowdsourcing, Human-in-the-loop.*
- *Advanced Data Utilization & Domain Applications (Medical Information, Education, Geographic Information, etc.):*
  - *Healthcare, COVID-19, Tourism, Geographic Data Utilization, Real Estate, Smart Factories, Agriculture/Fisheries, IoT, Mobility, Smart Cities, Digital Twins, SDGs, Disaster & Emergency Management, Environmental Earth, Resources & Energy, Social Media, News & Mass Media, Politics, Law, Education: e-Learning, EdTech, Knowledge Engineering & Learning Support, Behavioral Data, Scientific Data, Sports Data Utilization, Music, Food & Recipes, Comics, Comedy, Games & Entertainment.*

Papers whose topic are far from data engineering and information management may be rejected without review. Further, even papers having some relevance with "data engineering and information management" may be rejected without review, when their main topic are outside of the area and they require reviewers who have special knowledge of the topic. This special section does not accept SURVEY papers.

### 2. Submission Guidelines:

- A manuscript should be prepared according to the guideline ([https://www.ieice.org/eng/shiori/mokuji\\_iss.html](https://www.ieice.org/eng/shiori/mokuji_iss.html)). We encourage the authors to use the IEICE Style File (<https://www.ieice.org/ftp/index-e.html>). The standard number of pages is 8 for a PAPER and 2 for a LETTER with the format determined by the IEICE Style File. The maximum number of pages for the initial submission of a LETTER is 4.
- **Submit the manuscript and "Copyright Transfer, Article Processing Charge Agreement, Notices from the IEICE, and Privacy Policy" to the IEICE through the IEICE Web site([https://review.ieice.org/regist/regist\\_baseinfo\\_e.aspx](https://review.ieice.org/regist/regist_baseinfo_e.aspx)).** Choose "[Special-DA] Data Engineering and Information Management" in the menu of "Journal/Section" in the submission page.
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- Submission deadline of the manuscript is May 21, 2024 23:59 (JST) (firm).

### 3. Notice to the Authors:

- Upon accepted for publication, all authors, including authors of invited papers, should pay the page charges covering partial cost of publication around January 2025. **If payment is not completed by 15 February, 2025 your manuscript will be handled as rejection.**
- The standard period of 60 days between the notification (of conditional accept) and the second submission can be shortened according as the review schedule.
- If there are non-members among the authors, we recommend that the authors take this opportunity to join the IEICE. For detailed information on the IEICE Membership Application, please visit the web-page, [https://www.ieice.org/eng\\_r/join/individual\\_member.html](https://www.ieice.org/eng_r/join/individual_member.html). If all authors are non-members, the article processing charge for non-members will be applied, except for invited papers.
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