SASIGD 2026

2026 International Conference on Sustainable AI for Social Impact and Global Development

August 13–14, 2026

Technically Co-Sponsored by IEEE SSIT, #68127

CALL FOR PAPERS – SPECIAL SESSION

Scalable Data Architectures for Real-Time Healthcare AI

Session Co-Chairs

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Session Code: **SS34**

Session Description

This special session deals with the problem of architectural latency and compliance complexity in healthcare data systems that prevent real-time AI applications from reaching their full potential in clinical settings. Traditional ETLbased data architectures introduce significant delays between data generation and AI-driven insights, creating barriers to timely clinical decision-making, patient care optimization, and operational efficiency. Healthcare organizations face the dual challenge of processing massive volumes of sensitive patient data (often 10+ terabytes daily) while maintaining strict regulatory compliance (HIPAA, GDPR) and enabling real-time machine learning workloads. The industry lacks standardized approaches for "Zero-ETL" architectures that can eliminate transformation bottlenecks while preserving data governance, security, and audit capabilities required in healthcare contexts. The goal is to bring together researchers, practitioners, and policymakers to advance the state-of-the-art in healthcare data engineering by sharing innovative architectural patterns, validated frameworks, and real-world implementations that enable compliant, real-time AI at scale. This session will foster discussion on bridging the gap between theoretical data architecture research and production-grade healthcare AI systems, with emphasis on measurable impact on patient outcomes, operational efficiency, and healthcare accessibility. We seek contributions that demonstrate both technical rigor and practical applicability in high-stakes healthcare environments, addressing challenges spanning cloud-native infrastructures, edge computing for medical devices, federated learning across institutions, and AI governance frameworks for autonomous clinical systems.

The topics of interest include, but are not limited to:

- Zero-ETL and Lakehouse architectures for healthcare AI workloads
- HIPAA-compliant ML pipeline design and data governance frameworks
- Real-time clinical decision support and predictive analytics systems
- Federated learning for multi-institutional healthcare collaboration
- Edge computing for patient monitoring and medical device integration
- AI-driven prior authorization and utilization management automation
- Multi-modal data integration (EHR, imaging, genomics, wearables)
- Explainable AI infrastructure and governance for clinical decision-making

IMPORTANT SUBMISSION DEADLINES

Call for Special Session proposals: **February 12, 2026**

Call for Regular Papers: **March 1, 2026**

Call for Student Posters: **March 8, 2026**

PAPER SUBMISSION

Scan the QR Code or Visit

https://sasigd.org/special-sessions.php

REVIEWERS REGISTRATION

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https://forms.gle/oBdwKjcHC8gs6PyaA

Experts are invited to join as reviewers for SASIGD 2026.

All the accepted & presented papers will be submitted for possible inclusion in IEEE Xplore.

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