

**Integrating Sex and Gender Characteristics into Medical AI for Enhanced Equity**

Heajin Kim, Senior researcher

This presentation highlights the critical need to reflect sex and gender differences in the development of medical artificial intelligence. By exploring the limitations of gender-blind AI models, this talk will propose actionable strategies for integrating sex and gender characteristics to mitigate bias and foster equity in healthcare outcomes.

Exploring Data Bias: An Overview of Korea's AI Hub Healthcare Datasets

Jeongyeon Kim, Researcher

High-quality data is the foundation of fair AI. This talk presents an overview of publicly available healthcare datasets in Korea's AI Hub, focusing on demographic representation and potential sources of data bias. By examining dataset characteristics and distribution patterns, the presentation shares key observations and raises considerations for the development of equitable medical AI.

Methodological Advances in Fair Medical AI: A Review of Current Research Trends

Yusung Chu, Yonsei University, Postdoctoral Researcher

This presentation reviews and summarizes recent studies on algorithmic fairness in medical AI. It focuses on how bias and data imbalance are identified and measured, and how performance differences across patient subgroups are evaluated. The talk will also introduce representative approaches to reduce bias, such as subgroup-aware evaluation, data rebalancing, and algorithmic debiasing, providing an overview of current efforts toward more inclusive medical AI.

Addressing Dataset Imbalances through Object-Oriented Synthetic Data Generation

Wonjung Park, Postdoctoral Researcher, School of Computing, KAIST

Data scarcity and imbalance are significant hurdles in training inclusive medical AI. This talk explores innovative techniques utilizing synthetic data generation to address these imbalances. Drawing on recent developments in generative AI, the presentation will demonstrate how object-oriented synthetic data can enhance the diversity and biological trustworthiness of medical datasets.

