

AI Sym4MED. Synthetic and scalable data platform for medical empowered AI

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Tecnología: Inteligencia Artificial; Tecnologías del Lenguaje

Descripción general:

AI Sym4Med aims at developing a platform that will provide healthcare data engineers, practitioners, and researchers access to a trustworthy dataset system augmented with controlled data synthesis for experimentation and modeling purposes.

This platform will address data privacy and security by combining new anonymization techniques, attribute-based privacy measures, and trustworthy tracking systems. Moreover, data quality controlling measures, such as unbiased data and respect to ethical norms, context-aware search, and human-centered design for validation purposes will also be implemented to guarantee the representativeness of the synthetic data generated. Indeed, an augmentation module will be responsible for exploring and developing further the techniques of creating synthetic data, also dynamically on demand for specific use cases. Furthermore, this platform will exploit federated technologies for reproducing un-identifiable data from closed borders, promoting the indirect assessment of a broader number of databases, while respecting the privacy, security, and GDPR-compliant guideline

The proposed framework will support the development of innovative unbiased AI-based and distributed tools, technologies, and digital solutions for the benefit of researchers, patients, and providers of health services, while maintaining a high level of data privacy and ethical usage. AI Sym4Med will help in the creation of more robust machine learning (ML) algorithms for real-world readiness, while considering the most effective computation configuration. es.

Furthermore, a machine-learning meta-engine will provide information on the quality of the generalized model by analyzing its limits and breaking points, contributing to the creation of a more robust system by supplying on-demand real and/or synthetic data. This platform will be validated against local, national, and cross-border use-cases for both data engineers, ML developers, and aid for clinicians' operations.

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