Machine Learning Side Effect Trend Predictions and the SIDER Database

Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications • Article • *Open Access* • 2024 • DOI: 10.58346/JOWUA.2024.I4.007

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Abstract

In the Pharmaceutical and Healthcare industries, understanding medications is key in the treatment of patients. Worldwide, there are hundreds of thousands of medications available, classified in categories related to medication therapy and the remediation that they provide. With so many different types of medication, medical doctors and pharmacists need to determine what kinds of drugs to provide to patients with specific medical needs. New medication studies necessitate careful analysis of available medication data during clinical trials, prior to production of new medications, and through the course of prescribed medication therapy. he use of medication therapy is not justified if the number of side effects outweighs the remedial benefits. Therefore, not all medications

are deemed medically safe for all patients. Supervised machine learning techniques assist scientists with predicting side effects of medications that are under development. Prediction techniques aid future development of medications based on the properties of current medication data models.

Author keywords

Clinical Trials; Drug Safety; Machine Learning; Medication Therapy; Pharmaceutical Industry; Side Effect Prediction; SIDER Database; Supervised Learning

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