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May 20th, 12:30 PM


## Towards Pharmacovigilance Using Machine Learning To Identify Unknown Adverse Reactions Triggered By Drug-Drug Interaction

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Kakar T, Qin X, Wunnava S, Rundensteiner EA. (2016). Towards Pharmacovigilance Using Machine Learning To Identify Unknown Adverse Reactions Triggered By Drug-Drug Interaction. UMass Center for Clinical and Translational Science Research Retreat. Retrieved from [https://escholarship.umassmed.edu/cts\\_retreat/2016/posters/43](https://escholarship.umassmed.edu/cts_retreat/2016/posters/43)

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## **Towards Pharmacovigilance Using Machine Learning To Identify Unknown Adverse Reactions Triggered By Drug-Drug Interaction**

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Adverse Drug Reactions (ADRs) are a major cause of morbidity and mortality in world. There is thus a growing need of methods facilitating the automated detection of drugs-related ADR; especially ADRs that were not known from clinical trials but later arise due to drug-drug interactions. In this research our goal is to discover the severe unknown Adverse Drug Reactions caused by a combination of drugs, also known as Drug-Drug-Interaction. We propose to use Association Rule Mining to find the ADRs caused by using a combination of drugs yet not known to be caused if these drugs were taken individually. For evaluation, we will test out the proposed strategies on real-world medical data extracted from the spontaneous adverse drug reaction reporting system called FAERS. The results mined by our tool will be checked both manually by literature review and then verified by domain experts for interestingness and accuracy.

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