Project Summary Report

2024-0244

Reevaluating Treatment Response Prediction in Mental Health: A Study on Generalizability

Objective
To reevaluate the generalizability of clinical prediction models by reanalyzing data from the same clinical trials as a previously published paper using different machine learning algorithms and techniques. Beyond schizophrenia as a diagnosis, the study also sought to broaden the scope by including bipolar disorder, to explore potential condition-specific validation challenges.

Methods
The analysis would follow the same strategy as described in the original proposal. Various machine learning algorithms, including neural networks, decision trees, and support vector machines would be used to reanalyze existing data. Furthermore, subgroup analyses would be conducted to explore potential differences in model performance between SZ and BD cohorts. Recalibration techniques would also be applied to enhance model accuracy. The analysis was not completed due to the team encountering logistical challenges in writing code and accessing data in the remote desktop interface provided by the YODA Project. Moreover, there were issues during the installation of additional CRAN packages in the R programming language in the remote environment, which prevented the completion of the project.

Results
No results were generated from the available data.

Conclusions
N/A