Beitrag ID: **5** Beitragskennung: **111** Typ: **Poster**

Feature Reduction Improves Drug Response Prediction

Machine learning approaches play an important role in precision medicine by predicting drug responses based on the molecular profiles of patients. However, the high dimensionality of molecular profiles requires feature reduction. To assess the effectiveness of different feature reduction strategies for drug response prediction (DRP) on cancer, we evaluated four feature reduction methods on cell line and tumor gene expression data. These methods include Landmark genes, drug pathway genes, pathway activities, and Transcription Factor (TF) activities. Our analysis showed that TF activities provide the best predictive performance. While our study was necessarily limited to a discrete spectrum of feature reduction methods, we believe that it can provide a new and meaningful reference point for machine learning research in DRP.

Find me @ my poster

Keywords

Drug response prediction, Feature reduction, Transcription factor activity

TentID

Autor: FIROOZBAKHT, Farzaneh (Hamburg University)

Co-Autoren: Dr. YOUSEFI, Behnam (Institut Pasteur); Dr. TSOY, Olga (Hamburg Universität); BAUMBACH, Jan (Universität Hamburg); Dr. SCHWIKOWSKI, Benno (Institut Pasteur)