Automating Machine Learning for the Life Sciences with the JADBio platform

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Abstract

Machine learning is a major tool in life sciences. It can be employed to identify the patterns, regularities, multivariate correlations that predict outcomes of interest such as disease status, disease subtype, a quantified trait, time to death, metastasis, or relapse, to name a few. Machine learning can also be employed for Knowledge Discovery to identify the molecular quantities (called feature selection) that are responsible for these predictions, providing insight into the biological mechanisms involved. However, Machine Learning is largely inaccessible to life scientists as it requires significant expertise. In this talk, we'll present the challenges and proposed solutions for automating the machine learning process and the knowledge discovery process and democratizing it to biologists, pharmacologists, and medical experts.