Article

[Yuri Marx](#) · Jul 13, 2020 2m read

 Open Exchange

Machine Learning with IntegratedML and Sapphire

Currently, the process of using machine learning is difficult and requires excessive consumption of data scientist services. AutoML technology was created to assist organizations in reducing this complexity and the dependence on specialized ML personnel.

AutoML allows the user to point to a data set, select the subject of interest (feature) and set the variables that affect the subject (labels). From there, the user informs the model name and then creates his predictive or data classification model based on machine learning.

It is not necessary to know about cognitive algorithms, since AutoML internally executes the main algorithms of the market internally and points out the best algorithm to predict or classify your data.

From the trained model, the user can now point new data and make predictions and classifications with ease.

The new InterSystems IRIS Advanced Analytics has an AutoML engine, the IntegratedML, in addition to working with two other very famous ones, the H2O or DataRobot (as additional options).

AutoML operation takes place using SQL commands documented at: https://docs.intersystems.com/irislatest/csp/docbook/Doc.View.cls?KEY=GIML

That's where Sapphire comes in. It is a web application found on the Open Exchange (https://openexchange.intersystems.com/package/SAPPHIRE) and that allows connecting to IRIS Advanced Analytics to create and train IntegratedML models visually, abstracting the need for interact on the database command line.

The following is an example.

1) Follow the instructions at https://openexchange.intersystems.com/package/integratedml-demo-template to get an AutoML environment running.

2) Follow the instructions at https://openexchange.intersystems.com/package/SAPPHIRE to get an instance of Sapphire running.

3) Access localhost: 8080 (or the port that was configured on your docker) and enter the problem data, as in the following illustration:
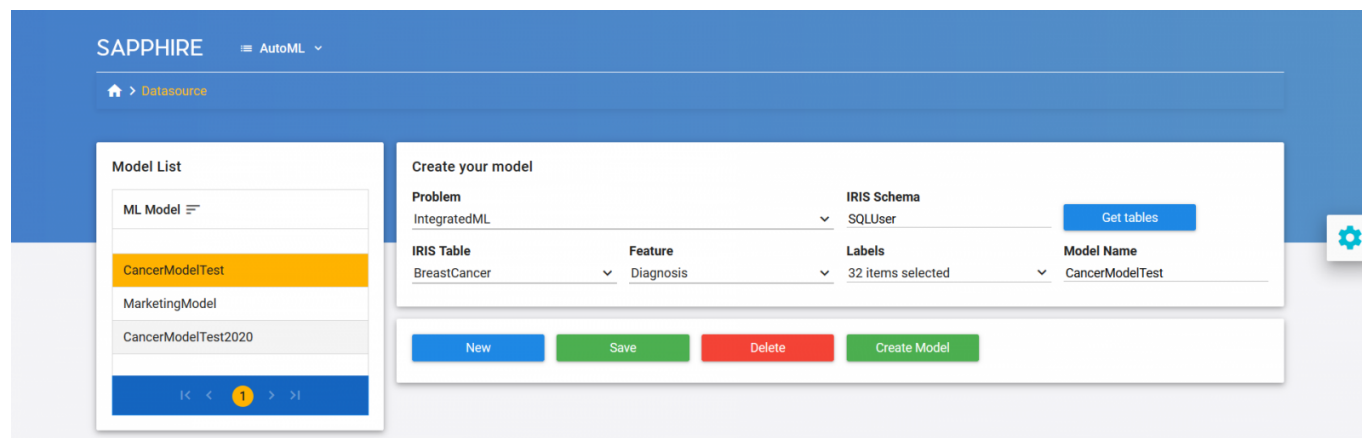
4) Save your model in Save button. Test your connection in Test button.

5) In the AutoML menu, at top, select Model Definition, see:
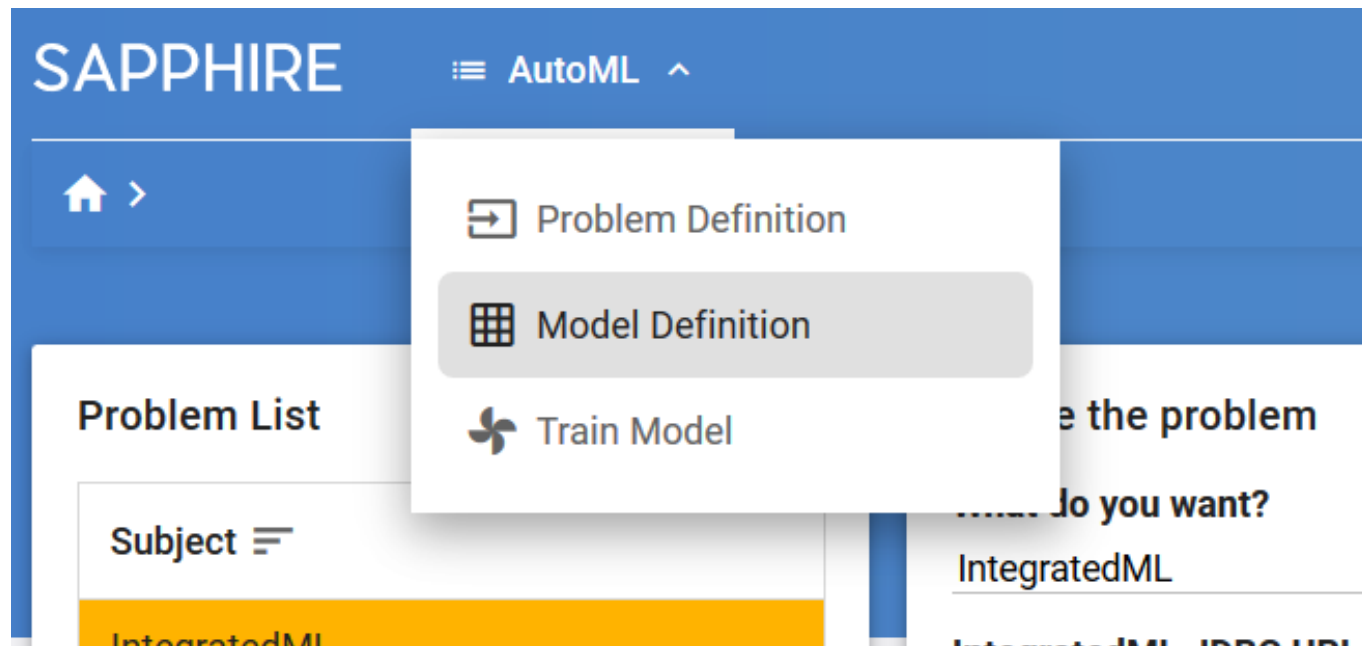
6) In the model definition, select the problem created in the step 4 and fill fields as this sample:
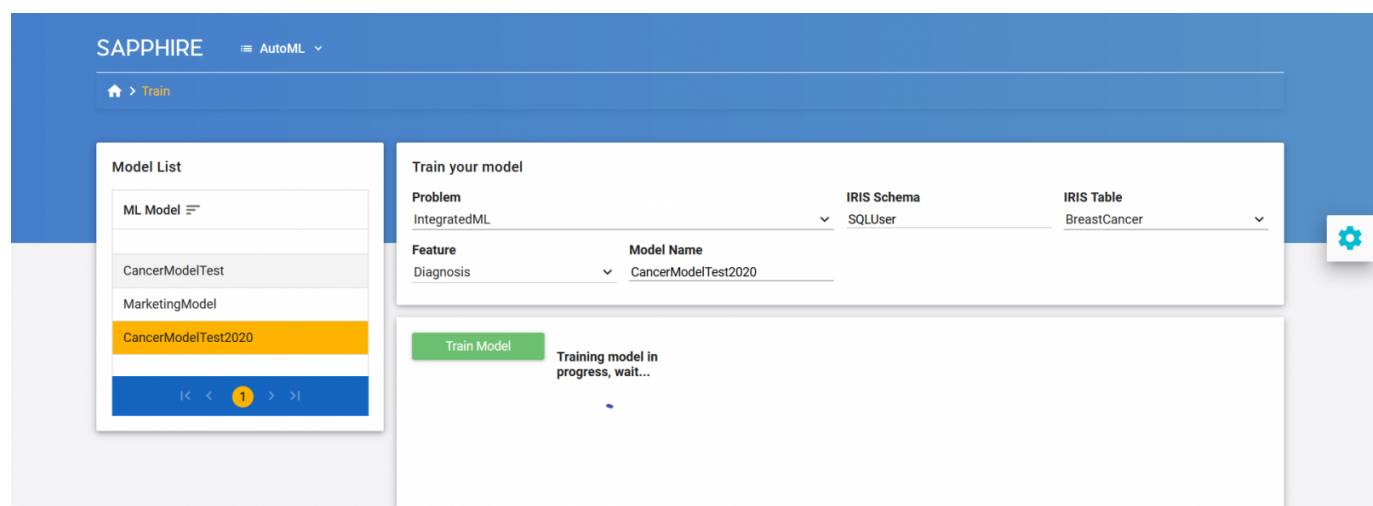

Tip: to load IRIS table, fill IRIS Schema and click Get tables.

7) Click Save button to save data. After save, click in Create Model to create ML Model in the IntegratedML.

8) Now we will train the model. Select Train Model in the AutoML menu, see:
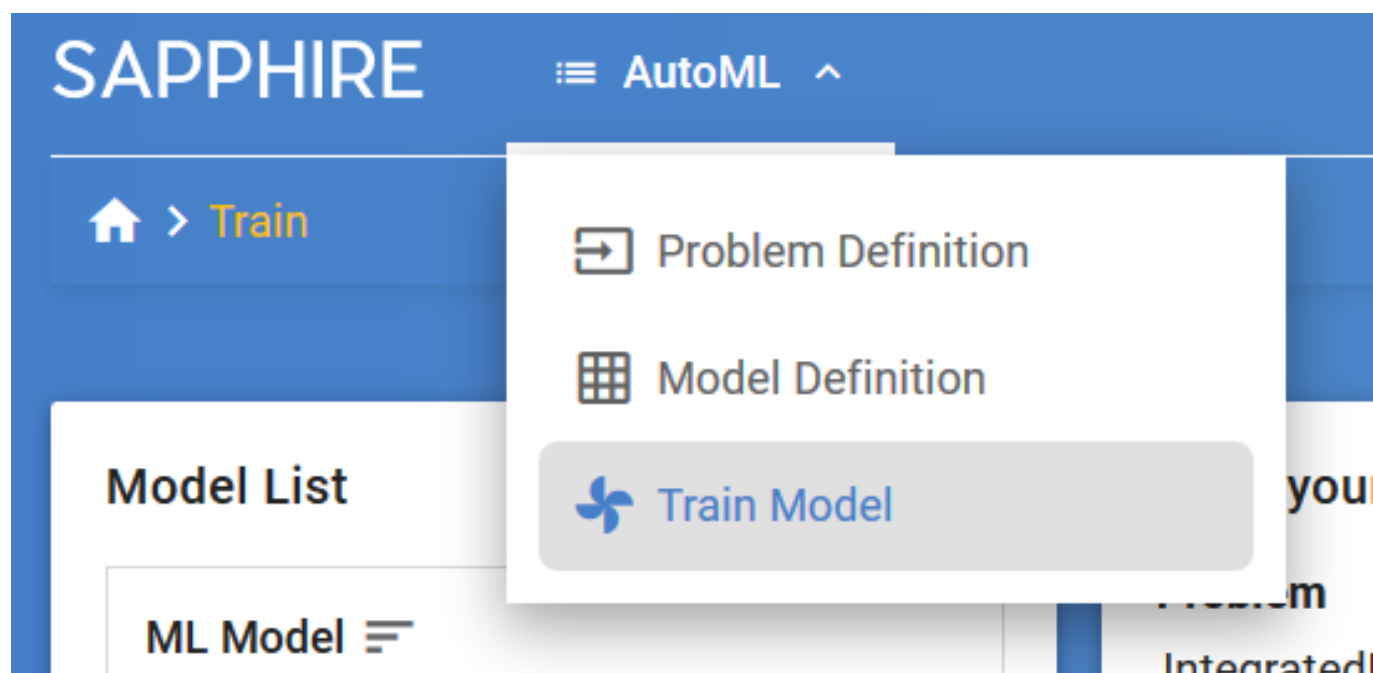
9) Select the model and click Train Model to train the model into IntegratedML. See sample:

10) Your model is ready to predict new data!

#Contest #IntegratedML #Machine Learning (ML) #InterSystems IRIS
Check the related application on InterSystems Open Exchange