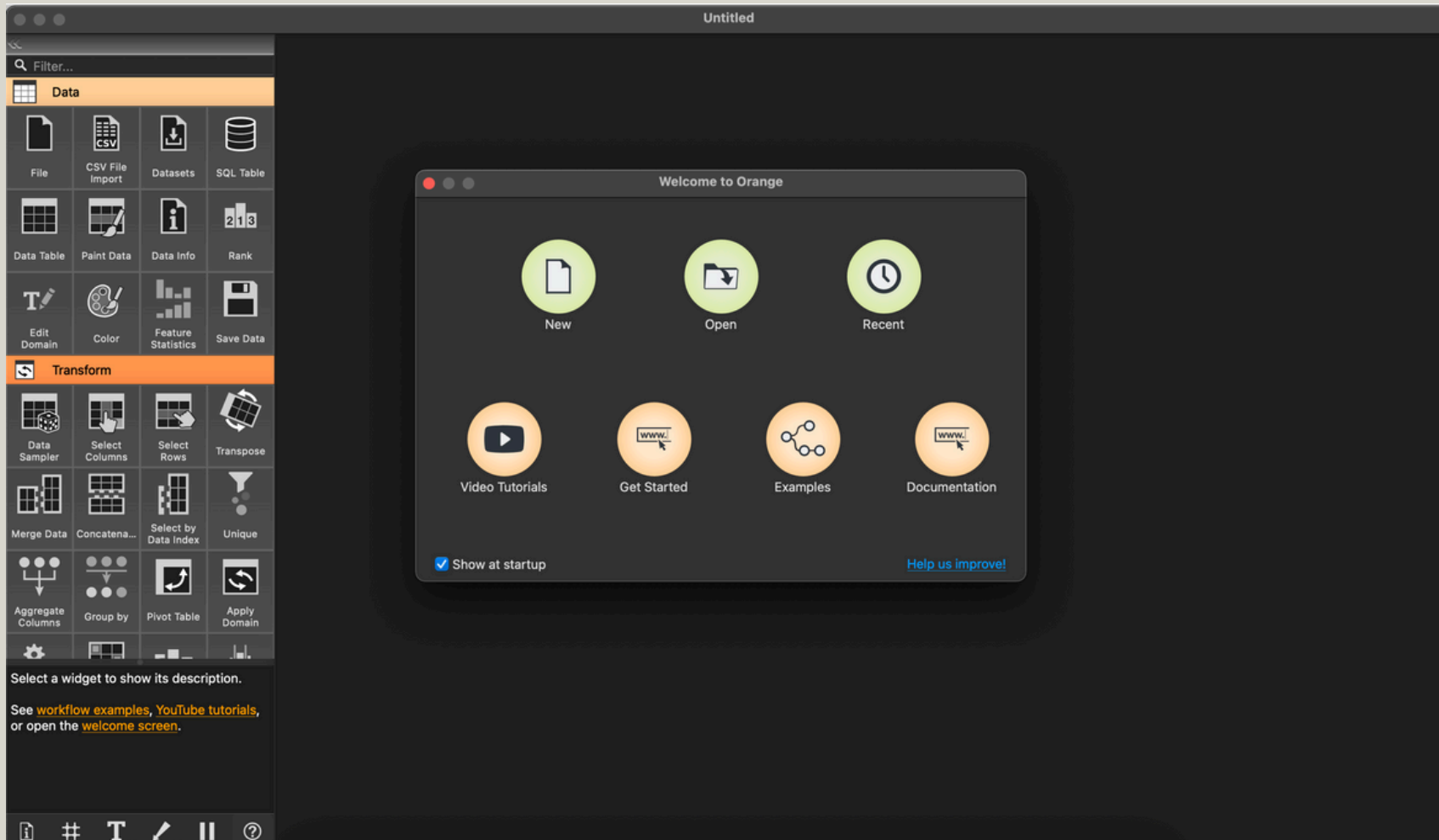


# Evaluation with Orange

## Step 1: Launch Orange Data Mining Software



## Step 2: Perform Evaluation

The Orange3.16.1 interface displays a workflow for evaluating a Decision Tree model. The workflow consists of three widgets: File, Tree, and Test and Score. The File widget outputs data to the Tree widget, which then outputs to the Test and Score widget. The Test and Score widget is open, showing the following settings:

- Cross validation** (selected):
  - Number of folds: 10
  - Stratified (checked)
- Random sampling** (not selected):
  - Repeat train/test: 10
  - Training set size: 66 %
  - Stratified (checked)

The evaluation results for the target (None, show average over classes) are shown in the following table:

Model	AUC	CA $\wedge$	F1	Prec	Recall	MCC
Tree	0.963	0.933	0.933	0.934	0.933	0.900

The Test and Score widget also shows a comparison table for the Tree model, comparing it to itself. The table shows probabilities that the score for the model in the row is higher than that of the model in the column. Small numbers show the probability that the difference is negligible.

File

Data

Tree

Learner

Test and Score

### Step 3: Interpret Evaluation Metrics

Cross validation

Number of folds: 10

☒ Stratified

Cross validation by feature

Random sampling

Repeat train/test: 10

Training set size: 66 %

☒ Stratified

Test and Score

Evaluation results for target (None, show average over classes)

Model	AUC	CA ^	F1	Prec	Recall	MCC	
Tree	0.963	0.933	0.933	0.934	0.933	0.900	

Compare models by: Area under ROC

☐ Negligible diff.: 0.1

	Tree
Tree	

Table shows probabilities that the score for the model in the row is higher than that of the model in the column. Small numbers show the probability that the difference is negligible.

?

→ 150 | - | □ | -

→ 150 | 1x150

## Step 4: Utilize Confusion Matrix

