

What's New in MATLAB R2021b for Data Science?

Data Science

MATLAB

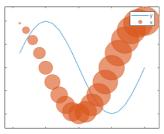
Machine Learning

Deep Learning

Data Preparation

Compute By Group Live Task Summarize, transform, or filter by group Create Plot Live Task

Add additional visualizations



Python

Run Python From MATLAB

>>> pyrun("a = b*c", b = 5, c = 10)

>>> md = pyrun("d = a+c", "d")

Support for Python 3.9

MATLAB now supports CPython 3.9

Portability

Parallel Computing

Share parallel code with **any** MATLAB user with **backgroundPool**. This environment will run your code in the background

>>> parfeval(backgroundPool,@magic,1,3)

Modelling

Anomaly Detection

Detect anomalies in data using the isolation forest algorithm

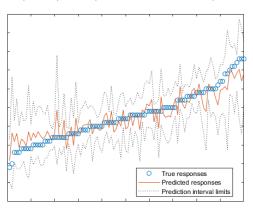
Classification Learner App

Train Gaussian kernel classifiers for nonlinear model with many observations

Explainability

Generalized Additive Models: Plot prediction intervals

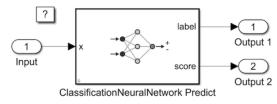
Train a generalized additive model (GAM), and then compute & plot the prediction intervals of response values.



Simulink

Neural Network Prediction Blocks

You can now integrate the **predict** function of neural network classification and regression objects into Simulink using the new prediction blocks



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Simulink

Deep Network Designer

Export trained network to Simulink

Computation

Parallel Inference

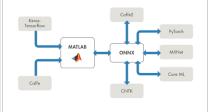
Predict, classify and extract features in parallel with DAG & Series Network

Automatic Differentiation

Use complex numbers with dlarray

Interoperability ONNX Network

Automatic generation of custom layers when unsupported layers



Other

Finance

Reinforcement Learning

Hedging an Option using Reinforcement Learning Toolbox

Optimization

Integer Constraints

Solve multiobjective problems with gamultiobj integer, bound, linear, and nonlinear inequality constraints

Parallel Computing

GPU arrays

Check memory used with the whos function

Deployment

MATLAB Production Server

GET Metrics

Use the GET method to retrieve metrics for a server instance in the Prometheus® metrics format: cpu_time, requested_in_queue, requests_failed, etc.

Web App Server

Customize your Apps Home Page
Deploy web apps directly from App
Designer