

# What's New in MATLAB R2022a for Data Science?

## MATLAB

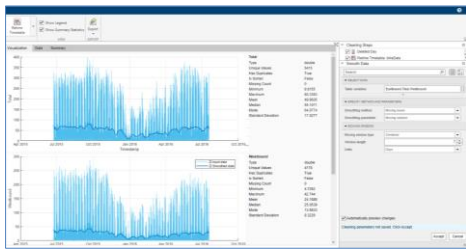
### Data Preparation

#### [Create Your Own Live Task](#)

You can now create your own Live Editor task

#### [Data Cleaner App](#)

Add additional visualizations



### Python

#### [Editor Python Support](#)

View and edit Python files with syntax highlighting, auto-indenting & delimiter matching

```
add_python.py x +
1 # Python Module example
2
3 def add(a, b):
4     """This program adds two
5     numbers and return the result"""
6
7     result = a + b
8     return result
```

## Deployment

### MATLAB Production Server

#### [Docker microservice](#)

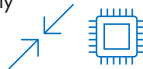
Create a microservice Docker image from a production server archive



### MATLAB Parallel Server

#### [MATLAB Job Scheduler for Auto-Resizing](#)

You can customize your MATLAB® Job Scheduler (MJS) cluster to resize automatically

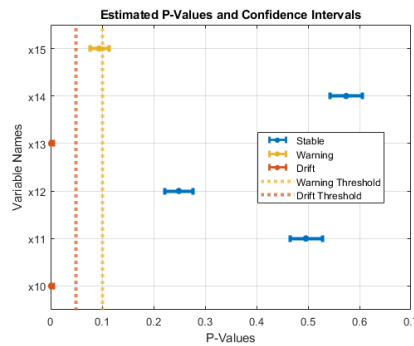


## Machine Learning

### Modelling

#### [Drift Detection](#)

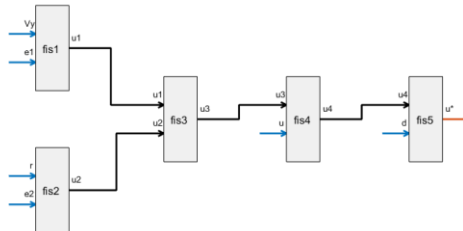
Detect drifts between baseline and target data using permutation testing



### Explainability

#### [Explain Black-Box Model Using Fuzzy Logic](#)

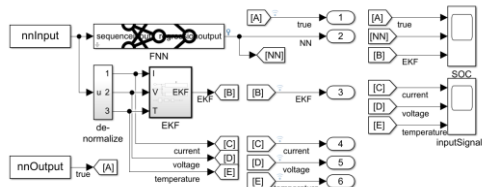
Develop a fuzzy inference support system that explains the behavior of a black-box model



### Simulink

#### [Predict Battery State-of-Charge in Simulink](#)

Use a feedforward deep learning network inside a Simulink® model to predict the state of charge (SOC) of a battery



## Deep Learning

### Main Documentation Page

#### [Deep Learning in MATLAB](#)

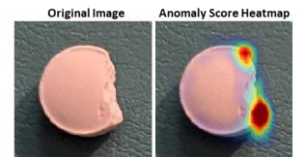
### Modelling

#### [Multi-Input Networks](#)

Train networks with mixtures of image, sequence, or feature inputs

#### [Detect Image Anomalies Using Explainable One-Class](#)

Train an anomaly detector for visual inspection of pill images



### Interoperability

#### [TensorFlow Lite](#)

Load TensorFlow Lite model



### Code Generation

#### [Pruning](#)

Network that can be pruned by using first-order Taylor approximation

## Other

### Finance

#### [Deep Learning Example](#)


Backtest Strategies Using Deep Learning

### Optimization

#### [Problem-Based Optimize Live Editor Task](#)


**Optimize**  
Solve an optimization problem or system of equations

Select approach



**Problem-based (recommended)**

- Easier to define problem
- Represents problem inputs symbolically
- Built-in automatic differentiation



**Solver-based**

- Start with a solver
- Represents inputs as matrices/functions
- Allows specialized solution methods