What's New in MATLAB® R2024b?

Environment

New Desktop for MATLAB (Beta)
Try new features including dark theme, an updated layout, and expanded search capabilities
To try these new features, download the **New Desktop for MATLAB (Beta)** on File Exchange.

Live Editor Fonts
Customize font, size, color, and formatting of text and code styles
Using the Customize Styles dialog box. You can apply your customized style to all new live scripts.

Language and Programming

MATLAB Package Manager
Organize and distribute code using packages
Use the **MATLAB Package Manager** to create, find, install, and manage MATLAB packages.
A *package* is a collection of MATLAB code, related files, and a package definition file that defines the package identity and dependencies.

MATLAB & Python

Support for version 3.12
MATLAB now supports CPython version 3.12. For supported version information, see **Versions of Python Compatible with MATLAB Products by Release**.
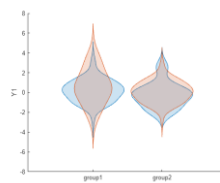
Convert between Python and MATLAB dictionaries
When passing data from Python to MATLAB, you can more easily convert Python dictionaries to MATLAB dictionaries.
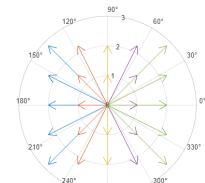
Apps & Graphics

Violin Plots
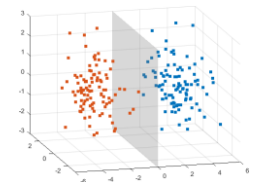Visualize grouped numeric data by using `violinplot`.

Compass Plots
Create compass plots in polar axes by using `compassplot`.

Constant planes
Create infinte planes by using `constantplane`.

uibutton and uitogglebutton
Specify HTML markup and display equations in button text by setting the *Interpreter* property.

Text

App Designer Dark Theme
You can now have a dark theme for the development of your MATLAB apps in App Designer.

Software Development Tools

Source Control Examples
Use Git hooks in MATLAB
This example **Use Git Hooks in MATLAB** shows how to use Git™ hooks in MATLAB to standardize your commit workflows.

MATLAB Test
Justify missing coverage for MATLAB source code
Improve your coverage metrics by using justifications to filter blocks of MATLAB source code that were covered by a method other than automated testing, for instance, by interactive testing.

Application Deployment

MATLAB Runtime
Create a MATLAB Runtime installer for specified files
Create a MATLAB® Runtime installer, using `compiler.runtime.customInstaller`, with a minimal size footprint that installs only the MATLAB Runtime components required to run the specified artifacts created with MATLAB Compiler™.

Security
Package Code with Secrets
You can use any `compiler.build` function with the `SecretsManifest` option to include a JSON file that specifies secrets to embed within your deployable code archive. See **Handle Sensitive Information in Deployed Applications**.