Jetzt noch besser - Was ist neu in MATLAB?

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Introducing the New MATLAB Desktop
MATLAB Toolstrip
Find what you need

- Tabs organize commonly used functionality

- Functionality only appears when needed

- Quick Access Toolbar for commonly used commands
What are MATLAB Apps?

- Interactive MATLAB programs that include a GUI
- MATLAB Apps Gallery makes it easy to find and launch apps
- Apps are included in many MATLAB products
- There are also many user-written apps
Getting More Apps

MATLAB Apps

Finding, creating, and sharing MATLAB apps.

MATLAB apps are interactive applications that can be included in some MATLAB products. They can be installed through the MATLAB community, through the MATLAB file exchange, or from the File > Apps > File Exchange menu.

Getting Apps

Apps from the MATLAB Community

You can find user-contributed MATLAB apps that can be downloaded and installed in your apps.

Explore Apps on MATLAB File Exchange

Math, Statistics, and Optimization Apps

- Curve Fitting
  - Fits curves and surfaces to data.
  - Available in Curve Fitting Toolbox

- Distribution Fitting
  - Fits probability distributions to data.
  - Available in Statistics Toolbox

- MBC Model Fitting
  - Create experimental designs and statistical models for model-based calibration.
  - Available in Model-Based Calibration Toolbox

- MBC Optimization
  - Generate optimal lookup tables for model-based calibration.
  - Available in Model-Based Calibration Toolbox

- MuPAD Notebook
  - Perform and document symbolic calculations.
  - Available in Symbolic Math Toolbox

- Neural Net Clustering
  - Solve clustering problems using self-organizing map (SOM) networks.
  - Available in Neural Network Toolbox

- Neural Net Fitting
  - Solve fitting problems using two-layer feed-forward networks.
  - Available in Neural Network Toolbox
Import Tool

- Interactive import of
  - Delimited and fixed-width text files
  - Excel sheets
  - Data base tables

- Improved handling of
  - Mixed numeric and text data
  - Dates

- Define rules for handling non-numeric values

- Automatically generate MATLAB code (scripts or functions) to automate the process
Command Line Suggestions

- Suggested corrections for mistyped functions and variables in the Command Window

```matlab
>> datstr(Date(1))
Undefined function 'datstr' for input arguments of type 'double'.

Did you mean:
>> datestr(Date(1))
ans =
    01-Jan-2005 01:00:00
```

- Press Enter to execute the suggested command, or Esc to delete it
Documentation Center and Redesigned Help

- Content organized by topic rather than content type
- Browser-like interface, with improved search
  - Persistent table of contents (13a)
  - Multiple tabs
  - Search term highlighting
  - Facets allow users to filter search results
MATLAB Unit Testing Framework

- `matlab.unittest` package

- xUnit-style testing framework for the MATLAB language
  - Allows writing and running unit tests, and analyzing test results
  - Includes a set of readily available qualification methods
  - Supports automation, and provides easy reuse of test-cases
MATLAB Production Server

- Directly deploy MATLAB programs into production
- Scalable & reliable, low latency
- Use with web, database & application servers
Phased Array System Toolbox
Design and simulate phased array signal processing systems

- **R2012b**
  - FM Continuous Waveform (FMCW) generation and processing
  - MATLAB Compiler support

- **R2013a**
  - Polarization support for antennas, arrays, and targets
  - Three new MATLAB apps
Other Updates - Examples

- **Image Processing Toolbox**
  - Image segmentation using active contours
  - C code generation for ten functions
  - GPU acceleration for eleven functions

- **Statistics Toolbox**
  - Support vector machines (SVMs) for binary classification, PCA algorithms for missing data, and Anderson-Darling goodness-of-fit test

- **Financial Instruments Toolbox**
  - Calibration and Monte Carlo simulation for Hull-White, Linear Gaussian, and LIBOR market models
Learn More

Key Takeaways

- R2012b & R2013a: Two important new Releases of MATLAB

- Enhancements to Usability, Discoverability and Documentation for Increased Productivity

- New Tools, New Capabilities, Great New Experience