MATLAB EXPO 2015 KOREA
2015년 5월 21일 목요일 인터컨티넨탈 코엑스, 서울
다양한 개발 및 사용 환경에서의 MATLAB의 강력한 기능 활용 방법

Senior Application Engineer
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Moving from Ideas and Data to Results

Access
- Files
- Code & Applications
- Hardware

Explore & Discover
- Data Analysis & Modeling
  - Algorithm Development
    - Code: for k=1:max
      - x = fft(dat)
      - y = 20*log1
  - Application Development

Share
- Reporting and Documentation
- Outputs for Design
- Deployment
  - MATLAB
  - Excel
  - .NET
  - C/C++
  - Java
  - .dll

Automate
How Will You Share the Work You Have Done in MATLAB?

- Generate documentation of your computations and results
- Package and distribute your MATLAB code to other MATLAB users
- Provide desktop applications so others can use your algorithms without having MATLAB
- Integrate your custom algorithms into a web application to reach a larger community
Sharing Your Work

- Automatically generate reports and documentation
- Package as a MATLAB app or custom toolbox
- Deploy applications to other environments
Who Do You Need To Share Your Work With?

Deploy your MATLAB code to people who do not have MATLAB
The Range of Application Platforms
Sharing for the Desktop

- Automatically generate reports
  - Publish MATLAB files
  - Customize reports using MATLAB Report Generator

- Package apps and toolboxes as a single installable file

- Generate standalone applications
Sharing Your Work

- Automatically generate reports and documentation
- Package as a MATLAB app or custom toolbox
- Deploy applications to other environments
Packaging and Sharing MATLAB Apps

- Create single file for distribution and installation into gallery

- Packaging tool:
  - Automatically includes all necessary files
  - Documents required products
Toolbox Packaging

- Package your toolbox as a single installer file
  - Contains all of the code, data, apps, documentation, and examples
  - Checks for dependent files and automatically includes them
  - Documents required products

- Included folders and files automatically appear on path when installed

- View details and uninstall toolboxes with Manage Custom Toolboxes dialog box
Benefits of Deploying MATLAB Code

- Domain experts maintain ownership of ideas, algorithms, and applications
- Flexibility to integrate with different programming languages
- Implement a common algorithm on different platforms
- Avoid time consuming and error prone re-coding
- Easily adopt algorithm improvements throughout lifecycle
Sharing Programs Outside of MATLAB

- Royalty-free
- Encryption to protect intellectual property
Which Product will Fit Your Needs?

**MATLAB Compiler** for sharing MATLAB programs without integration programming

**MATLAB Compiler SDK** provides implementation and platform flexibility for software developers

**MATLAB Production Server** provides the most efficient development path for secure and scalable web and enterprise applications
Sharing Your Work

- Automatically generate reports and documentation
- Package as a MATLAB app or custom toolbox
- Deploy applications to other environments
  - Without integration programming
Using MATLAB Compiler

Compiled applications can be shared as:

- Standalone desktop applications
- Add-ins for integration with Microsoft Excel spreadsheets
- Components that run MATLAB code against Hadoop

Create professional software with customizable installers, icons, and splash screens … without integration programming.
Sharing Standalone Applications

1. Application Author

2. MATLAB Compiler

   - MATLAB Application
   - Standalone Application
   - Excel Add-in
   - Hadoop

3. End User
Sharing Your Work

- Automatically generate reports and documentation
- Package as a MATLAB app or custom toolbox
- Deploy applications to other environments
  - With integration programming
Common Algorithm, Different Integration

Deploy to Desktop

Native code in MATLAB

Deploy to a Web app
Using MATLAB Compiler SDK

Flexibility and value for software developers

- Capabilities for integrating with: C/C++, .NET, Java
- Development toolkit for MATLAB Production Server

Develop a custom application server or deploy with MATLAB Production Server
Integrating MATLAB-based Components

Application author and software developer *might* be same person

Application Author

MATLAB Toolboxes

MATLAB Compiler SDK

MATLAB Production Server

Software Developer

MATLAB Runtime
Scale up with MATLAB Production Server

Most efficient path for creating enterprise applications

Deploy MATLAB programs into production
- Manage multiple MATLAB programs and versions
- Update programs without server restarts
- Reliably service large numbers of concurrent requests

Integrate with web, database, and application servers
MATLAB Application Deployment

- Share MATLAB programs with people who do not have MATLAB
  - Royalty-free distribution
  - Encryption to protect your intellectual property

- Create both standalone applications and components for integration

- Deploy to desktop, web, and enterprise applications
Learn more …

Product and Solutions home pages


Other useful links

- [http://www.mathworks.com/examples/](http://www.mathworks.com/examples/)
Questions?
Thank you