

Rev it up: Deploy Tiny Neural Network to Boost Embedded Field-Oriented Controls of Electrical Drives with MATLAB and ST Edge AI Developer Cloud

Hardware and Software Requirements

To participate in the workshop, you need:

1. A laptop
2. Google Chrome browser
3. A MathWorks account
4. A myST Account



You will be provided with a temporary MATLAB workshop license that will give you access to all products used in the workshop, as well as the workshop exercise files. Access to ST Edge AI Developer Cloud is public and free.

Please download a copy of this document to be able to click on the links provided.

Need Help?

If you run into any issues completing the steps below, we will assist throughout the workshop exercises.

Step I. Set Up Your MathWorks Account

If you don't have a MathWorks account, you need to create one to get access to MATLAB Online and the material for this event. You will need access to your email on the machine you are using to create the account.

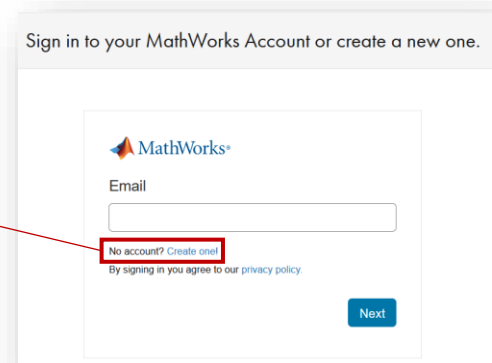
1. In Google Chrome, go to:
<https://www.mathworks.com/mwaccount/> and click **Create one!** next to No Account?:

No account? **Create one!**

2. Fill out the form and click **Create**. Follow the directions for verifying your email address.
3. To complete your registration, click the link in the verification email and fill out the form.

You must check the Online Services Agreement box.

You may leave these fields blank: Activation Key or License Number, Sales rep contact, Associate with a license, Trial

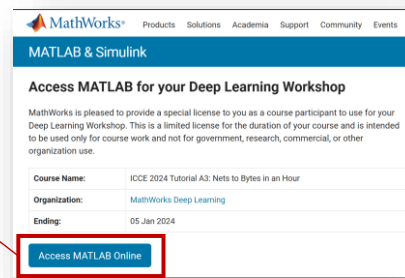


Step II. Activate the Workshop License

The workshop uses MATLAB Online. You must activate the workshop license to participate. You can activate this license starting from the day of the workshop up to a week after the workshop date.

1. Navigate to this address in Google Chrome:
Link will be shared in the readme page a week before the workshop.
2. If you are not already logged in, do so.

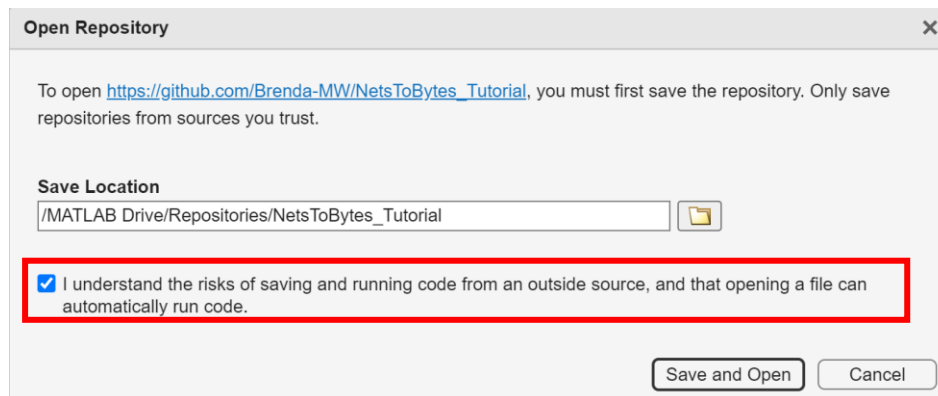
- Click **Access MATLAB Online**.



Step III. Access Exercise Files

MATLAB Online can port your workshop files from GitHub automatically. You will see a dialog pop-up for saving and opening the repository of files.

- Exercise files are located at: <https://github.com/Brenda-MW/RevUp-EAIF-AUSTIN-2025>
- Directly launch the workshop links from the “Open in MATLAB Online” button in README.
- Click on the checkbox to accept outside source code.
- To access the files, hit “Save and Open”.



Step IV. Verify Your Environment

To verify that your environment is correctly set up for the exercises:

- Run the command below in the MATLAB Online Command Window:

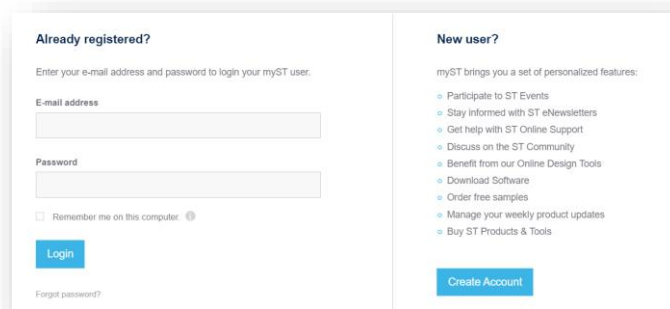
```
>> Setup
```

- Confirm that the **welcome message** is displayed.

Step V. Create myST account

If you don't have a myST account, you need to create one to get access to STM32Cube.AI Dev Cloud and use the material for this event. You will need access to your email on the machine you are using to create the account.

- Navigate to this address in Google Chrome: stm32ai-cs.st.com/home and click *Sign In*
- Create an account by filling out the form and click Create. Follow the directions for verifying your email address.
- To complete your registration, click the link in the verification email and fill out the form.



The image shows a login and registration interface for myST. It is divided into two columns. The left column, titled 'Already registered?', contains a text input for 'E-mail address', a password input, a 'Remember me on this computer' checkbox, a 'Login' button, and a 'Forgot password?' link. The right column, titled 'New user?', lists personalized features and includes a 'Create Account' button.

Already registered?

Enter your e-mail address and password to login your myST user.

E-mail address

Password

☐ Remember me on this computer. ⓘ

Login

Forgot password?

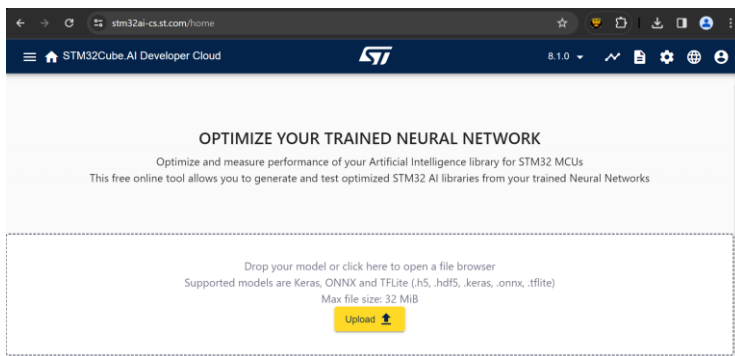
New user?

myST brings you a set of personalized features:

- Participate to ST Events
- Stay informed with ST eNewsletters
- Get help with ST Online Support
- Discuss on the ST Community
- Benefit from our Online Design Tools
- Download Software
- Order free samples
- Manage your weekly product updates
- Buy ST Products & Tools

Create Account

4. Successful log on shows the interface to upload models.



The image shows the STM32Cube.AI Developer Cloud interface. The header includes the STM32Cube.AI Developer Cloud title, the ST logo, and version 8.1.0. The main content area is titled 'OPTIMIZE YOUR TRAINED NEURAL NETWORK' and describes a tool for optimizing AI libraries for STM32 MCUs. It features a large dashed box for file upload with instructions to drop a model or click to open a file browser. Supported models listed are Keras, ONNX, and TFLite (h5, hdf5, .keras, .onnx, .tflite). The maximum file size is 32 MiB. An 'Upload' button with a file icon is at the bottom.

STM32Cube.AI Developer Cloud

8.1.0

OPTIMIZE YOUR TRAINED NEURAL NETWORK

Optimize and measure performance of your Artificial Intelligence library for STM32 MCUs

This free online tool allows you to generate and test optimized STM32 AI libraries from your trained Neural Networks

Drop your model or click here to open a file browser

Supported models are Keras, ONNX and TFLite (h5, hdf5, .keras, .onnx, .tflite)

Max file size: 32 MiB

Upload

Congratulations! You are all set up to join us on the hands-on workshop! Have fun!