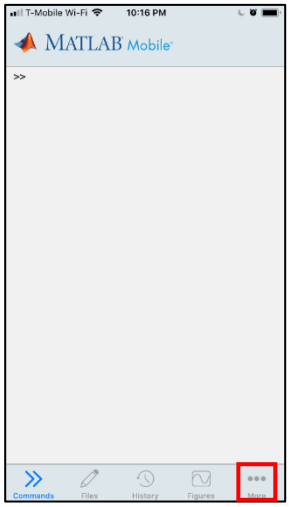
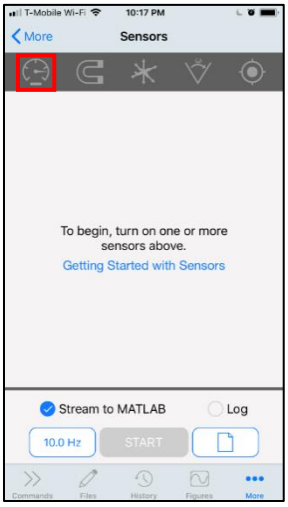
Pocket AI and IoT – Society of Women Engineers WE Conference

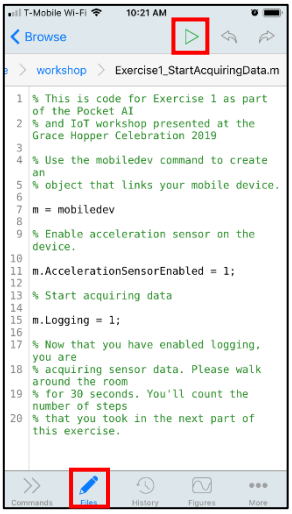
Getting Started with MATLAB Mobile on iOS

Explore the MATLAB Mobile App

1. Open the Sensors pane. Click **More** then **Sensors**.
   If you see a message in the **Sensors** pane about licensing, log out of MATLAB Mobile and log back in. To log out, click **More** then **Settings**. Tap the email for your MathWorks Account and select Forget Account. Close and re-open the app to log in again.
2. Identify the **Acceleration** sensor we will use in the workshop.
3. To execute a MATLAB script, open the .m file and run it using the green **Run** button.
   Click **Files** to navigate to the file browser. When you run a script, the app switches to the Command Window to show the script output.







Exercise 1. Analyze acceleration data from the sensor on your device to count steps

1. Open **Ex1_CountSteps.m** and click the green **Run** button to execute the script. A spinning wheel labeled Evaluating appears on your screen, indicating that the script is running.
2. Press **Return** when prompted to start logging sensor data for the script to analyze.
3. Walk around the room as you normally would for **20 seconds**. The script keeps time for you.
4. View your step count in the Command Window and look at the Figure output.

Exercise 2. Analyze sensor data using machine learning to classify activities

1. Open **Ex2_ClassifyActivity.m** and click the green **Run** button to execute the script.
2. Press **Return** when prompted to start logging sensor data for the script to analyze.
3. Move – walk, run, stand still – around the room for **30 seconds**.
4. View the classification results for your activity.

Exercise 3. Read and visualize aggregated data from ThingSpeak

1. Open **Ex3_ThingSpeak_Fitness.m** and click the green Run button to execute the script.
2. Enter your assigned team number and press **Return**
3. Press **Return** when prompted to start logging sensor data for the script to analyze.
4. Move – walk, run, stand still – around the room for **30 seconds**.
5. View fitness activity from all teams.

After the Workshop

We hope that you will continue exploring sensors, AI, and IoT in your own applications! After the workshop, you'll have access to many resources for inspiration and practice. You will also have access to the technologies used during the workshop for 30 days. After that, you are welcome to sign up for a trial.

Take Home Exercises

You can find four additional exercises in the folder called **TakeHome** in the **PocketAIandIoT** workshop folder along with a script called **calorieCount**. Each exercise has instructions in the comments of the script file.

If you want to edit any files in the workshop folder, first make a copy of the workshop folder in a browser at drive.matlab.com. You have write access for the files in the copied folder.

Want to Learn More?

- Practice programming and learn more about MATLAB by taking the **MATLAB Onramp:** https://matlabacademy.mathworks.com/
- Learn about deep learning in the **Machine Learning Onramp**: https://www.mathworks.com/training-schedule/machine-learning-with-matlab
- Learn about **ThingSpeak** for IoT projects: https://thingspeak.com
- Find inspiration from our user stories: https://www.mathworks.com/company/user_stories.html
- Learn more with a MATLAB trial license: https://www.mathworks.com/campaigns/products/trials.html

Keep in Touch!

Use and follow **#PocketAIAndIoT** and **#shelovesmatlab** on Twitter, LinkedIn, Facebook, and Instagram. Contact us if you are interested in bringing this material to your organization!

Hope Rubin
hrubin@mathworks.com
@herubin62

Anita Gajjala
agajjala@mathworks.com
@anitagajpur

Anjali Joshi
anjalij@mathworks.com
@anjjoshi1