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## Sample Code

# Customizing a PyTorch operation

Implement a custom operation in PyTorch that uses Metal kernels to improve performance.

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## Overview

### Note

This sample code project is associated with WWDC23 session 10050: [Optimize machine learning for Metal apps](#).

## Configure the sample code project

Before you run the sample code project:

1. Follow the instructions in [Accelerated PyTorch training on Mac](#).
2. Install PyTorch nightly (Python 3.7 or later is required).

```
pip3 install --pre torch --index-url https://download.pytorch.org/whl/nightly/cpu
```

3. Install Ninja

```
pip3 install Ninja
```

4. Run the sample.

## See Also

### Compute workflows

- `{}` Performing calculations on a GPU  
Use Metal to find GPUs and perform calculations on them.
- `{}` Selecting device objects for compute processing  
Switch dynamically between multiple GPUs to efficiently execute a compute-intensive simulation.
- `{}` Customizing a TensorFlow operation  
Implement a custom operation that uses Metal kernels to accelerate neural-network training performance.