

# Registering models

5 minutes

After running an experiment that trains a model you can use a reference to the **Run** object to retrieve its outputs, including the trained model.

### Retrieving model files

After an experiment run has completed, you can use the run objects **get\_file\_names** method to list the files generated. Standard practice is for scripts that train models to save them in the run's **outputs** folder.

You can also use the run object's **download\_file** and **download\_files** methods to download output files to the local file system.

```
# "run" is a reference to a completed experiment run

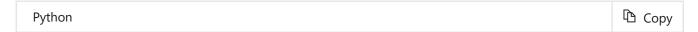
# List the files generated by the experiment
for file in run.get_file_names():
    print(file)

# Download a named file
run.download_file(name='outputs/model.pkl', output_file_path='model.pkl')
```

## Registering a model

Model registration enables you to track multiple versions of a model, and retrieve models for *inferencing* (predicting label values from new data). When you register a model, you can specify a name, description, tags, framework (such as Scikit-Learn or PyTorch), framework version, custom properties, and other useful metadata. Registering a model with the same name as an existing model automatically creates a new version of the model, starting with 1 and increasing in units of 1.

To register a model from a local file, you can use the **register** method of the **Model** object as shown here:



Alternatively, if you have a reference to the **Run** used to train the model, you can use its **register\_model** method as shown here:

#### Viewing registered models

You can view registered models in Azure Machine Learning studio. You can also use the **Model** object to retrieve details of registered models like this:

```
Python

from azureml.core import Model

for model in Model.list(ws):
    # Get model name and auto-generated version
    print(model.name, 'version:', model.version)
```

#### Next unit: Exercise - Training and registering a model

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