Domino for Practitioners (Activities Only)

Rev 3 Training Day
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Activity: Fork a Project

1. Sign into temporary training Domino instance and open the project:
   https://rev.workshop.domino.tech/u/melanie_veale/Intro-To-Domino/overview
2. Fork the project from the Overview page and name it '<your name>-Domino-Training'
3. Navigate to settings page:
   a. Make sure project is set to private
   b. Note Environment and Hardware Tier
4. Add a goal to the project called 'Train and serialize model'

Activity: Develop a Model

1. Navigate to the Workspaces tab in your training project
2. Select the 'JupyterLab' button (optionally name the workspace)
3. Open the Forecast_Power_Generation.ipynb
4. Run all cells in order
    a. Note how we install a new package directly into the notebook in cell
    b. Observe how the serialized model is exported at the end
5. **Sync** your files, then **Stop** your session
6. Navigate to the Files tab and note the updated files
7. Link your model.pkl file to the goal we set up earlier

Activity: Change your Compute Environment

1. Navigate to the Settings for your training project
2. Update the Compute environment to ‘Intro to Domino Power Forecasting’
3. (Optional) Navigate back to Workspaces and note your existing workspace still uses the default environment. You have two options to update:
    a. Edit the Settings for that individual workspace
    b. Create a new workspace, and note it picks up the new environment

Activity: Create and Publish a Model API

1. Navigate to the ‘Publish/Model APIs’ page in your project
2. Select ‘New Model’
3. Name the model ‘<your name>-Power-Generation-Prediction’ (description optional) and select ‘Next’
4. Under file enter ‘model_forecast.py’, and under the function to invoke enter ‘predict’
    a. Select ‘Create Model’
    b. Peruse the model code while waiting for the model to deploy
5. Test your model after it is running under the Model ‘Overview’ tab with the following sample

```
{
  "data": {
    "year": 2022,
    "month": 6,
    "day": 7
  }
}
```

6. (optional) Copy your model URL and token into the Model_caller.ipynb notebook to call your model

Take-home Activity: Create a Dash App

1. Peruse the files called ‘app.sh’ and ‘app.py’ in your training project
2. Navigate to Publish/App
3. Name your app ‘<your name> Power Generation in the UK’ and add an optional description
4. (optional) Decide whether to show your App in the launchpad, and what permissions it should have
5. Click ‘Publish’ on the bottom right
6. Once app is running select ‘View App’ to use it
7. **Stop** the app when you are finished

Take-home Activity: Create a Scheduled Report

1. Peruse the file called ‘scheduled_forecast.py’ in your training project
2. Navigate to the ‘Publish/Scheduled Jobs’
3. Under file name enter ‘scheduled_forecast.py’
4. Select a time in the next couple of minutes
5. Click ‘Schedule’
6. Verify Job runs at scheduled time and look at the results
7. Click the ⋮ next to the scheduled job and the select **Pause**

Take-home Activity: Create a Launcher

1. Peruse the file called ‘launcher_forecast.py’ in your training project
    a. Note the comments with the list of allowed values for fuel_type
2. Navigate to the ‘Publish/Launchers’ tab and click New Launcher
3. Under command to run enter ‘launcher_forecast.py’
4. Click Add Parameter once to add the start_date parameter
    a. Change the name to date, type to “Date” and enter 01/01/2022 as default
5. Click Add Parameter again to add the fuel_type parameter
    a. Change the name to fuel_type, type to “Select” and enter a comma separated list of accepted values - CCGT, OIL, COAL, NUCLEAR, WIND, PS, OCGT, BIOMASS
6. Click Save Launcher, then go back to the Launchers list
7. Run the Launcher with a different start_date and fuel_type and see the results

Activity: Use the Domino API to Tag a Project

1. Peruse the file called ‘tag-project-api.py’
2. Use the Domino API to create a script to tag the project with ‘time-series’
    a. Refer to the API docs found here for the specification
    b. Keep the tag ‘time-series’ or change it to a different tag
3. Select ‘Run’ from the top right corner
    a. Note you can also run the same code from a workspace, either by pasting into a notebook or by running the script from a Jupyter(Lab) terminal
4. After the job has completed, navigate to the project overview page and look at the tags

Take-home Activity: Explore Data Drift

1. Navigate to the Model Monitor page
2. Open any model
3. Open the data drift page
4. Change the test type and recalculate

Activity: Configure Monitoring

For the Model API, enable monitoring by selecting the training set to track drift against

1. Go to your newly published Model API overview page and navigate to the ‘Monitoring’ tab
2. Open ‘Configure Monitoring’ > ‘Data’ to select the right training set and version and set the model type to ‘Regression’
3. Call the model multiple times by pasting your model URL and token into the Model_caller.ipynb notebook and running
4. Refresh and view drift, set thresholds, etc

Need Help!?

The Docs:
docs.dominodatalab.com

Community:
community.dominodatalab.com

Submit a Ticket:
tickets.dominodatalab.com

Self-service Training:
learn.dominodatalab.com

Support

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