

Consider the definitions (between <definitions>
</definitions>) of step and task of analysis scenarios.

<definitions>

An analysis scenario is composed of steps and each step is accomplished through a series of tasks. You can think of a step as a macro-group of affine tasks.

</definitions>

Query: suggest me the steps I have to perform to accomplish the following analysis scenario, provided as a textual description

Analysis scenario: I have to read a database table, containing 10 columns: 1 column for the record ID, 1 column for the variable short name, 1 column for a timestamp value, 6 columns containing electrical current values and a column containing torque values (in Newton meter) collected from a smart machine engine.

The columns containing the record ID and the variable short name are not required for the next analysis steps.

I want to use the 6 columns containing electrical current values for building a LASSO regression model and the torque has to be the prediction target for the model.

Afterwards, I want to compare the predicted torque values with the real values.

Base your answer only on the analysis scenarios provided in the given context: <context>{context}</context>

Based on the provided analysis scenarios, here are the steps you should perform for your described analysis scenario:

<steps>

<Step id="1" name="Data collection">

<!-- Tasks related to reading the database table and selecting relevant columns -->

</Step>

<Step id="2" name="Data preprocessing">

<!-- Tasks related to preprocessing the data, such as removing unnecessary columns -->

</Step>

<Step id="3" name="Feature selection">

<!-- Tasks related to selecting features for the LASSO regression model -->

</Step>

<Step id="4" name="Model training">

<!-- Tasks related to training the LASSO regression model -->

</Step>

<Step id="5" name="Prediction">

<!-- Tasks related to predicting torque values using the trained model -->

```

    </Step>
    <Step id="6" name="Comparison">
        <!-- Tasks related to comparing predicted torque values
with real values -->
    </Step>
</steps>

```

Now you can proceed with detailing the tasks for each step.

Consider the definitions (between <definitions>
</definitions>) of step and task of analysis scenarios.

Consider the following list of steps (between <steps></steps>):
<steps>

```

    <Step id="1" name="Data collection">
        <!-- Tasks related to reading the database table and selecting
relevant columns -->
    </Step>
    <Step id="2" name="Data preprocessing">
        <!-- Tasks related to preprocessing the data, such as removing
unnecessary columns -->
    </Step>
    <Step id="3" name="Feature selection">
        <!-- Tasks related to selecting features for the LASSO
regression model -->
    </Step>
    <Step id="4" name="Model training">
        <!-- Tasks related to training the LASSO regression model -->
    </Step>
    <Step id="5" name="Prediction">
        <!-- Tasks related to predicting torque values using the
trained model -->
    </Step>
    <Step id="6" name="Comparison">
        <!-- Tasks related to comparing predicted torque values with
real values -->
    </Step>
</steps>

```

Query: suggest me the tasks I may execute to accomplish the step with
id="4" and name="Model training".

Produce as output only the ordered list of tasks (between
<tasks></tasks>).

Base your answer only on the analysis scenarios provided in the given
context: <context>**{context}**</context>

Sure, here are the tasks to accomplish the step with id="4" and
name="Model training" based solely on the provided context

```
<tasks>
  <Task id="1" name="Create dataset with electrical current
values and torque">
    <!-- Task details: Extract the relevant columns
(electrical current values and torque) from the preprocessed data
-->
  </Task>
  <Task id="2" name="Split dataset">
    <!-- Task details: Split the dataset into training and
testing sets -->
  </Task>
  <Task id="3" name="Normalize data">
    <!-- Task details: Normalize the features to ensure they
have similar scales -->
  </Task>
  <Task id="4" name="Train LASSO regression model">
    <!-- Task details: Train the LASSO regression model using
the training data -->
  </Task>
</tasks>
```