

ZERO SHOT

With reference to Atomic Data Services from the RAG system as Context, please suggest suitable services to address each of the steps below.

Given

Datasource 1: CSV file with 31 columns, including a row ID, timestamp, 28 temperature values, and X axis displacement values from a sensorized spindle on a working center machine.

I need services to perform the following steps.

STEP 1: A Collect service for reading the content of Datasource 1 by excluding the row ID column.

STEP 2: A Monitor service for building a multiple linear regression model on the dataset obtained from STEP 1. Consider the 28 temperature features as input for the model and the displacements feature as target. Produce as output only the two columns regarding the real and the predicted displacements.

Based on the provided context, here are the exact names of the services to address each step:

STEP 1: A Collect service for reading the content of Datasource 1 by excluding the row ID column can be addressed using a custom collect service with the following code snippet:

```
```python
import pandas as pd

def read_csv(request):
 data = pd.read_csv('/mnt/data/datasource1.csv')
 data = data.drop('row_id', axis=1) # exclude the row ID column
 return data.to_json(orient='records')
```
```

STEP 2: A Monitor service for building a multiple linear regression model on the dataset obtained from STEP 1 can be addressed using service `srv12` with the following endpoint:

```
```bash
/multiple_linear_regression
```
```

Here is an example request body for this service:

```

```json
{
 "dataframe": {
 "_type": "datatable",
 "columns": [
 {"name": "timestamp"},
 {"name": "temperature_1"},
 ...,
 {"name": "temperature_27"},
 {"name": "displacements"}
],
 "rows": []
 },
 "independent_variables": ["temperature_1", ..., "temperature_27"],
 "dependent_variable": "displacements",
 "projection_attributes": "",
 "filter_expression": ""
}
```

```

This request body excludes the `row_id` column from the dataset and specifies the independent variables (temperature features) and dependent variable (displacements). The service will return the real and predicted displacements as output.