Highlight Note

Capturing and Viewing Application Insights Data

Application Insights automatically captures any information written to the standard output and error logs, and provides a query capability to view data in these logs.

Writing Log Data

To capture telemetry data for Application insights, you can write any values to the standard output log in the scoring script for your service by using a `print` statement:

```
def init():
    global model
    model = joblib.load(Model.get_model_path('my_model'))
def run(raw_data):
    data = json.loads(raw_data)['data']
    predictions = model.predict(data)
    log_txt = 'Data:' + str(data) + ' - Predictions:' + str(predictions)
    print(log_txt)
    return predictions.tolist()
```

Azure Machine Learning creates a *custom dimension* in the Application Insights data model for the output you write.

Qurying Logs in Application Insights

To analyze captured log data, you can use the Log Analytics query interface for Application Insights in the Azure portal. This interface supports a SQL-like query syntax that you can use to extract fields from logged data, including custom dimensions created by your Azure Machine Learning service.

For example, the following query returns the **timestamp** and **customDimensions.Content** fields from log traces that have a **message** field value of *STDOUT* (indicating the data is in the standard output log) and a **customDimensions.[“Service Name”]** field value of *my-svc*:

```
traces
|where message == "STDOUT"
  and customDimensions.["Service Name"] = "my-svc"
| project  timestamp, customDimensions.Content
```

This query returns the logged data as a table:

timestamp	customDimensions_Content
01/02/2020…	Data:[[1, 2, 2.5, 3.1], [0, 1, 1,7, 2.1]] - Predictions:[0 1]
01/02/2020…	Data:[[3, 2, 1.7, 2.0]] - Predictions:[0]

More Information: For more information about using the Application Insights Log Analytics query interface, see **Overview of log queries in Azure Monitor** in the Azure Monitor documentation.