

Practice Exercise - Stream Processing

This document consists of some practice exercises that learners can implement on their own. The idea behind adding these practice exercises is to help the learner gain more knowledge.

In this week mentored learning session we have covered following concepts:

1. Creating kinesis stream
2. Creating tables on DynamoDB for anomaly data storage
3. Running the consumer program to consume the kinesis stream on local machine
4. Performing anomaly detection and pushing the detected data in the database

Additional tasks

In the lab session, you have gone through a python script that pulls data from kinesis stream, as an practice work you can try following:

1. Write a similar python script that pulls data directly from the raw_data table that was created earlier.
2. You can also explore the following link and figure out a way to create the dynamodb and table and kinesis stream through python code. Have a look at the official documentation below:
 - a. <https://boto3.amazonaws.com/v1/documentation/api/latest/guide/dynamodb.html>
 - b. <https://boto3.amazonaws.com/v1/documentation/api/latest/reference/services/kinesis.html?highlight=kinesis#client>
3. As part of the lab you have created a local consumer for your kinesis stream. Although, on the console there is an option to create consumers as well. For additional tasks you can try to push the kinesis stream data in S3 bucket using “**Amazon Kinesis Data Firehose**”.