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WS-04

# Real Time ML inference on Streaming Data workshop

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# Agenda - Real Time ML inference on Streaming Data Workshop

- Use Case – Predict Taxi fare before boarding the taxi
- Architecture for the workshop
- AWS Services Involved
- Have your IDE / text editor ready
- Execute the Lab

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# Use Case for the workshop

You will predict the taxi fare in real time for the passenger before passenger boards the taxi, based on many factors like distance covered, date/time of the ride, passenger counts etc. you will do below activities:

- Train a model (Linear learner algorithm) and deploy the model
- Deploy Amazon API Gateway and AWS Lambda to invoke the model real time endpoint
- Deploy Amazon Kinesis Data analytics application (Apache Flink ) to get ML inference on streaming data
- Deploy Amazon Kinesis Data stream to handle streaming data
- Python data generator script for streaming data generation

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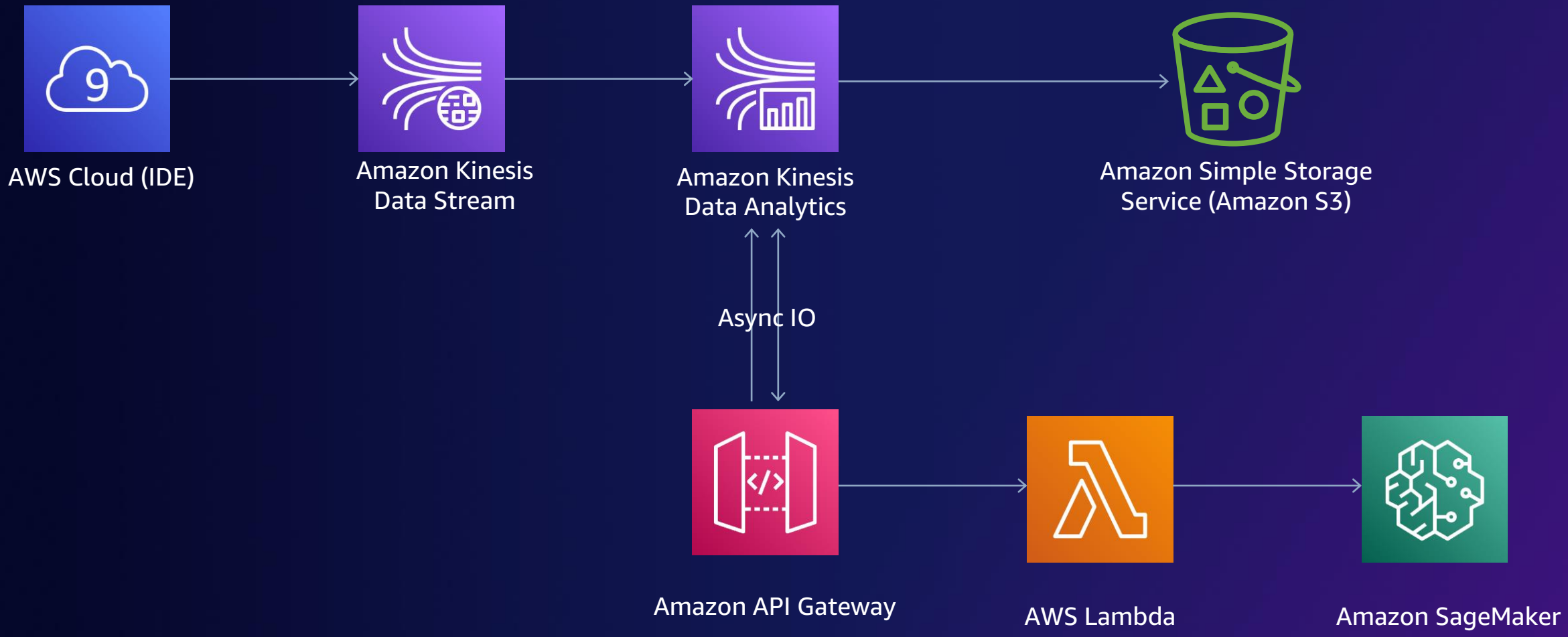
# Architecture

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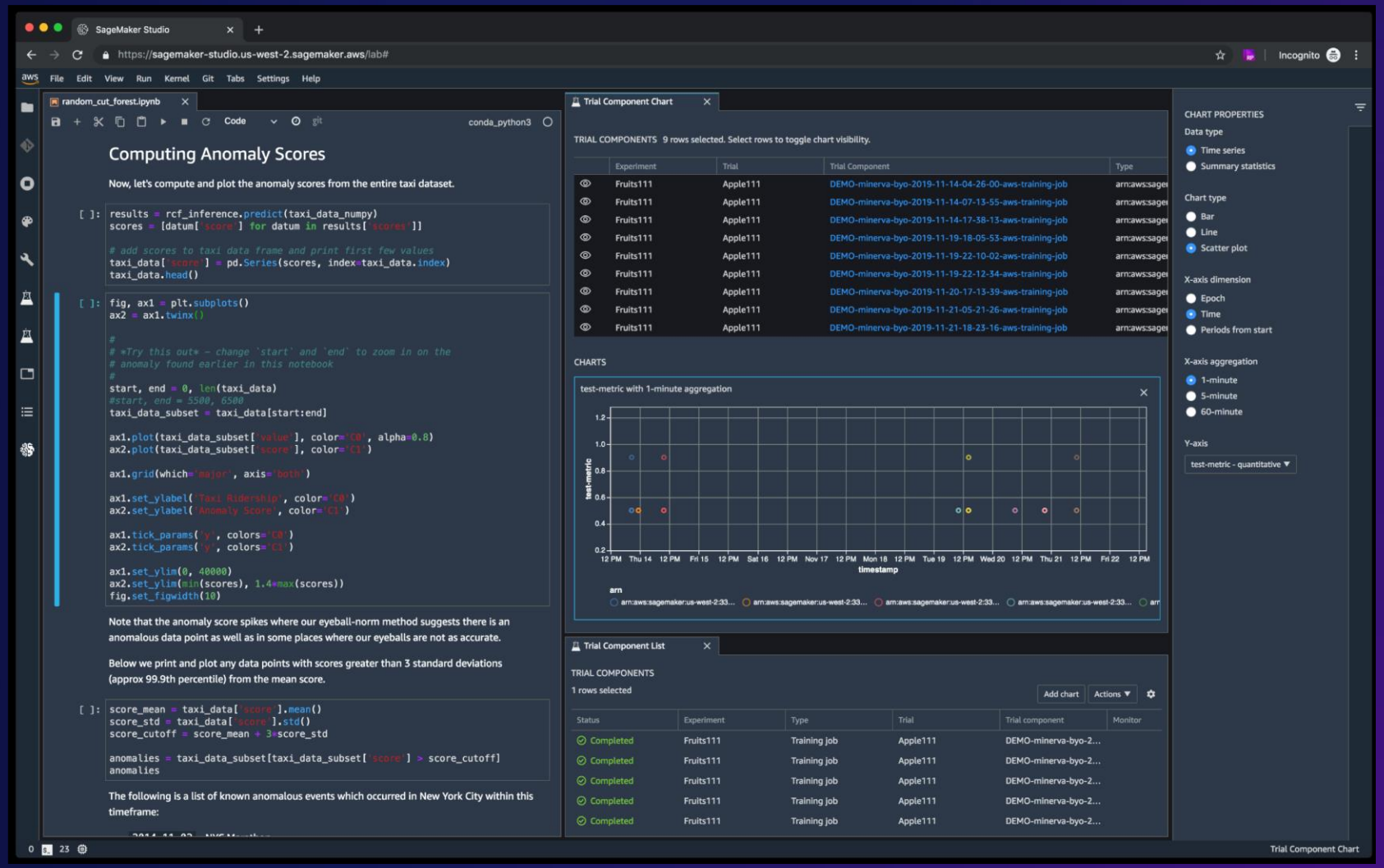
# Amazon Sagemaker

- Train the model using Sagemaker Studio Notebooks

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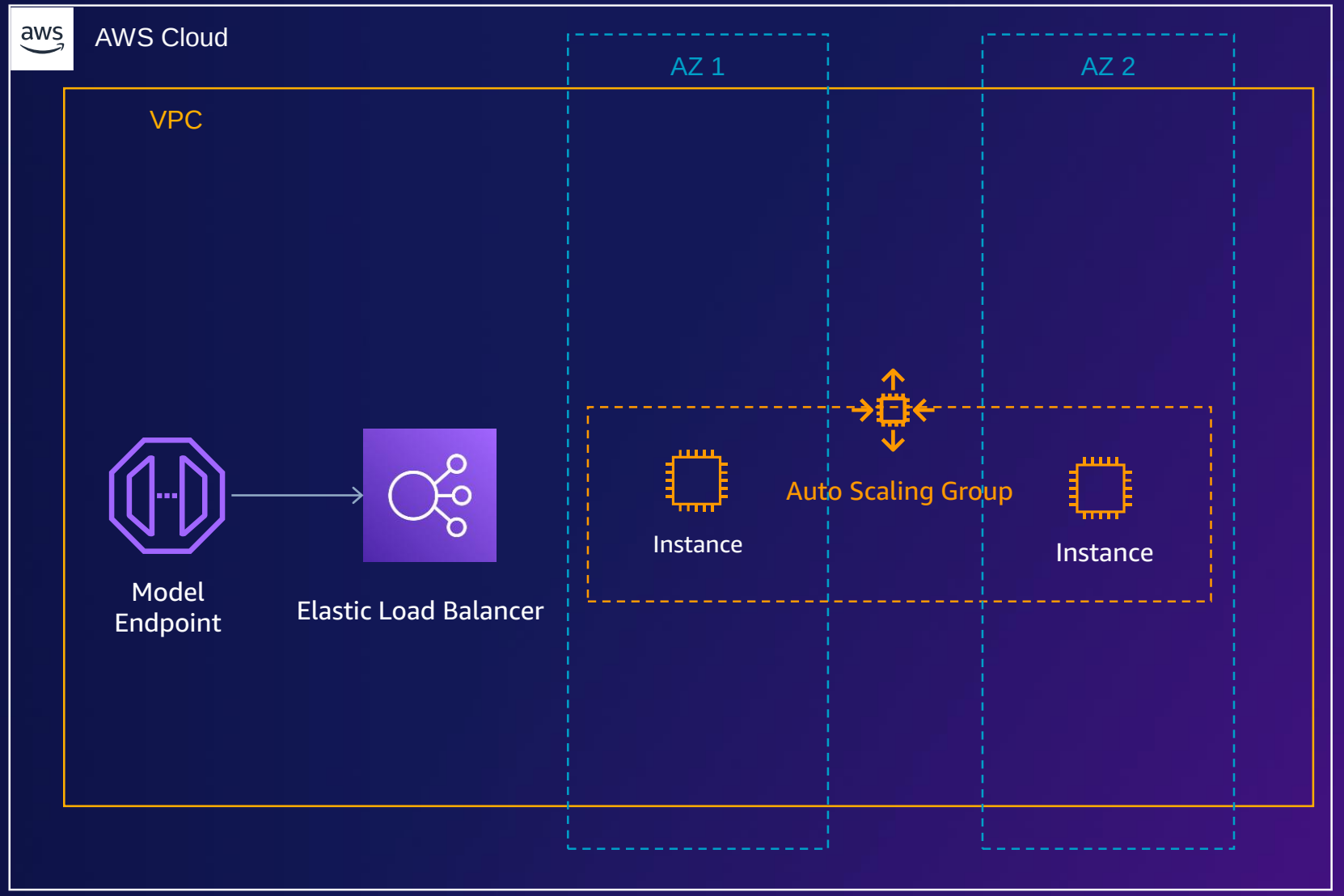
# Amazon Sagemaker

- Deploy the Model using Sagemaker Real Time Hosting Service

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# Kinesis Data Stream

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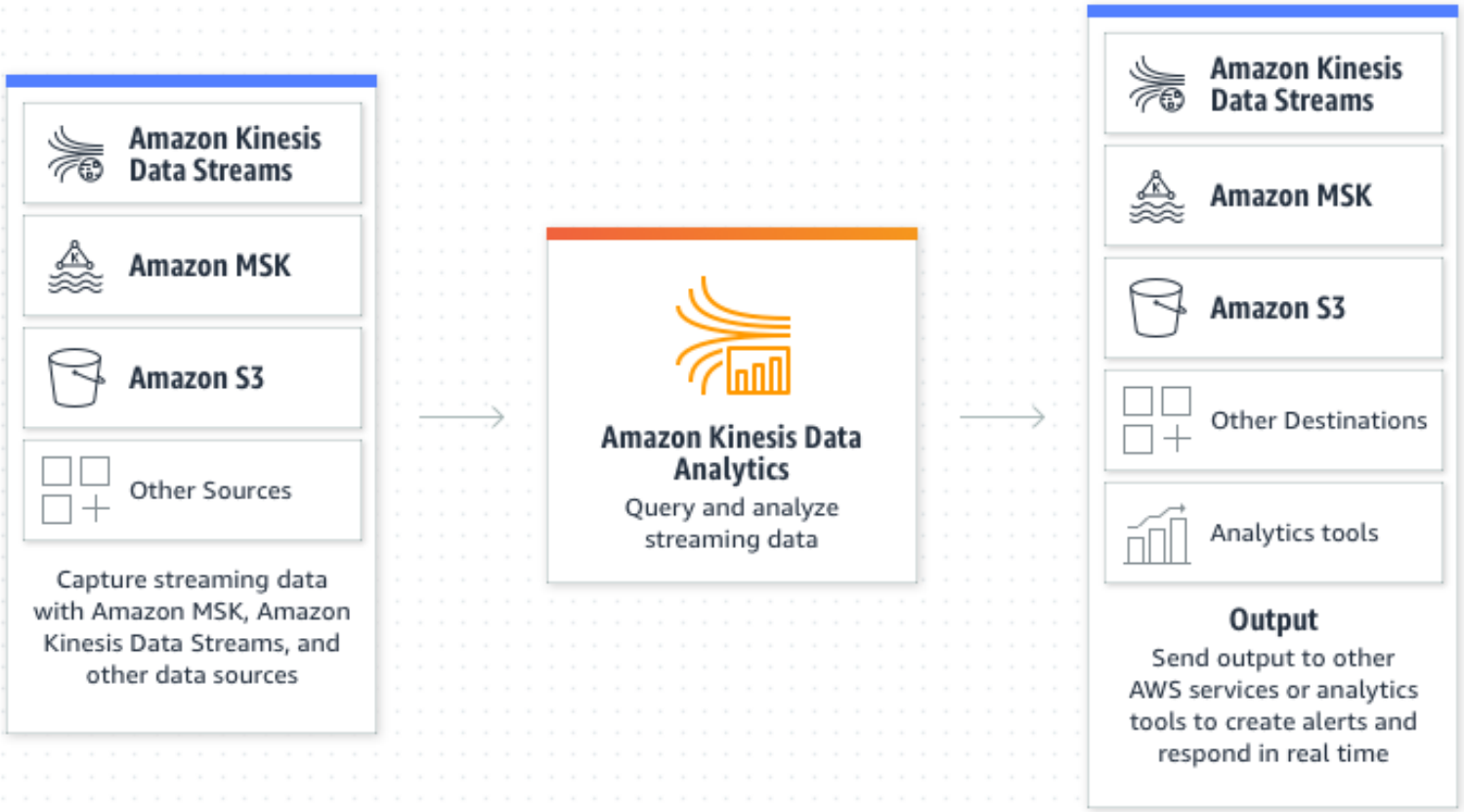
# Kinesis Data Analytics

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# Lab Assets

- Amazon Sagemaker Studio Notebook - TaxiFare_Predict_Liner_Learner.ipynb
- AWS Cloud Formation template - APIGW-Lambda.yaml
- Amazon Kinesis Data Analytics Application ( Apache Flink ) -Flink-Async-IO-1.0.jar
- Streaming Data generator python script - data.py

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