

## Project Overview: ML Workflow in Sagemaker

In this project I will be executing a workflow in Sagemaker using python in a Jupyter Notebook, Lambda and Step Functions. The following are the steps in the workflow to deploy a trained machine learning model to an endpoint that will be invoked by a Lambda function within a sequence in Step Functions

1. Data Staging
  - a. Extract Data from source
  - b. Transform into usable form
  - c. Load into system
2. Model Training and Deployment
  - a. Train a pre-built model in Sagemaker using the image classification algorithm
  - b. Deploy trained model to an endpoint
3. Lambdas and Step Functions
  - a. Write 3 Lambda functions to be chained in Step Functions
    - i. Retrieve an image from S3 and encode it
    - ii. Decode image and send to endpoint for inference
    - iii. Filter results for low scores
  - b. Chain the 3 Lambda functions in Step Functions
4. Testing and Evaluation
  - a. Provide sample images for the Step Function to process
  - b. Plot the scores of the sample images

Confidence Scores of the Sample of Images Passed to the Sagemaker Endpoint

