Next GEN CRM Integration Design Document

AWS DeepLens:

AWS DeepLens is a wireless video camera and API, it shows you how to use the latest Artificial Intelligence (AI) tools and technology to develop computer vision applications. This device uses deep convolutional neural networks (CNNs) to analyze visual imagery.

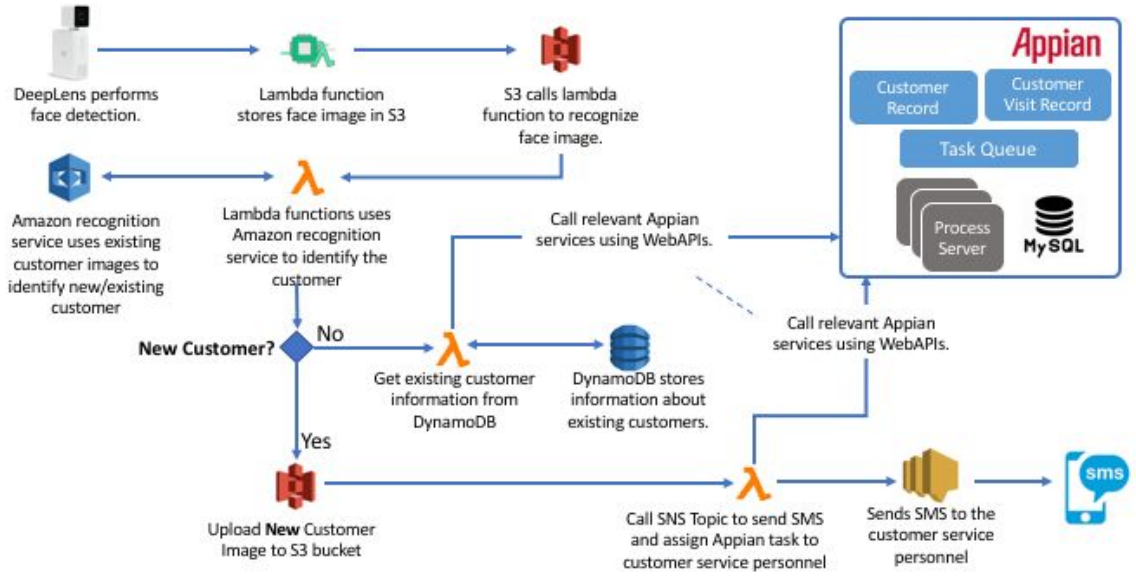
DeepLens work with following AWS Services:

- Amazon SageMaker, for model training and validation
- AWS Lambda, for running inference against CNN models
- AWS Greengrass, for deploying updates and functions to your device

Next Gen CRM:

AWS DeepLens captures a video and produces two output streams:

- Device Stream - The video stream passed through without processing
- Project Stream - Results of the model's processing video frames



1. Customer deeplens-face-detection lambda function receives unprocessed video frames and passes the unprocessed frames to the project's **deep learning model** and receives the processed frames from the model and upload into DeepLens Images folder in customer-images **S3 bucket.**

2. S3 Bucket triggers customer-face-analysis lambda function to call AWS Rekognition service to search by face image to find any match found for the uploaded image from the Rekognition collection, collection returns rekognition id for the image.
3. Customer face analysis function look up rekognition id in Dynamodb table (customer-rekoginition-collection) to retrieve name of the customer
4. Store the matched rekgonition id and name in customer-facial-history table, which is complete history of everyone who's ever visited to the bank
5. Lambda function triggers Appian Web API call by passing customer id, customer name and s3 image url as parameter to appian to assign the task to customer service personnel
6. In step 2, if there is no match found for the image in rekognition collection then the person is new customer. In this case, log to customer-history tables as "New Customer" and publish to SNS topic to SMS and call Appian Web API to assign the task to sales person