Liveness Detection Framework

To address vulnerabilities with facial recognition for identity verification, this solution helps you implement liveness detection mechanisms into your applications by means of an extensible architecture. To deploy this solution using the available AWS CloudFormation template, select Deploy with AWS.

1. An Amazon CloudFront distribution to serve the web application to the client device.
2. An Amazon S3 source bucket to host the sample web application static files.
3. Amazon API Gateway to expose the REST/HTTP API endpoints invoked by the client device.
4. An AWS Lambda function to process API requests.
5. An Amazon DynamoDB table to store information about each user’s challenge attempts, such as user ID, timestamp, and challenge-related parameters.
6. An Amazon S3 object storage bucket that holds user images captured by the client device and uploaded via the APIs.
7. Amazon Rekognition for identifying faces in an image along with their position and landmarks, such as eyes, nose, and mouth.
8. AWS Secrets Manager to store the secrets used to sign tokens.
9. An Amazon Cognito user pool to provide user access control to the API calls.

Deployable AWS Reference Implementation