

In the current project that involved building a Docker image of the face recognition code which identifies from the frames on the video and using it to create a Lambda function on Amazon Web Services (AWS) to fetch information of the first face from DynamoDB and store the output in the S3 bucket. I have worked on the tasks below.

1. Dockerfile: I have started by examining the Dockerfile that was provided. This file contains instructions for building a Docker image, which is essentially a packaged set of software and dependencies that can be run in a containerized environment. I reviewed the contents of the file to understand how the image was being built and what dependencies it required. Based on the understanding, I made some customizations to the file by adding extra files using the COPY command.
2. Local build: Once done with the changes made to the Dockerfile, I have built the image locally using the Docker client. This involved running a command that tells Docker to build the image based on the instructions in the Dockerfile. After the build process completed, I had a fully built Docker image on my MacBook.
3. Image tag and upload: I have then assigned a tag to the Docker image, which is essentially a version number that helps in keeping track of different versions of the image. Then I have uploaded the image to Amazon Elastic Container Registry (ECR), which is a fully managed Docker container registry that makes it easy to store, manage, and deploy Docker container images. By uploading the image to ECR, you made it available for use in other parts of the project.
4. Workload generator: The next part of the project involved testing the Lambda functions that would be created using the Docker image you built. To do this, I have used the given workload generator that could simulate many requests to the Lambda functions. It uploaded videos to an input S3 bucket, which would trigger the Lambda functions to process the videos and generate output CSV files in an output bucket.
5. Verification: Finally, I verified the output CSV files that were generated by the Lambda functions. I have compared the data in the output files to the expected output, ensuring that the functions were producing the correct results.