CSE 546 - Project 2 Individual Report

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Implementation of different tasks:

- **Lambda function for frame extraction**

Wrote a Lambda function to process video files and extract frames. The function was designed to ensure efficient input data handling and optimize the extraction process for faster and more accurate results.

- **Integration of Python face recognition library**

Integrated the Python face recognition library into the Lambda function to enable accurate identification of individuals in the extracted frames. This integration allowed the function to detect faces in the frames and recognize them based on the pre-trained models.

- **Code development for output CSV files**

Derived student information from the face recognition process and developed code to generate output CSV files. These files contained data related to the recognized individuals, such as their names, ID numbers, and other relevant information.

- **Local testing of Lambda function**

Tested the Lambda function locally to validate its functionality and optimize its performance. This involved running the function on a local machine to simulate the Lambda environment and ensure that it produced the desired results.

- **Contribution to project progress**

Delivered a robust solution for processing and analyzing video files: The Lambda function, integrated with the face recognition library, and output CSV files, provided a reliable and efficient mechanism for identifying individuals in video footage and extracting their information.

Major Learnings:

- Understood IAM, S3, and Lambda services in AWS.
- Familiar with the use of ffmpeg to manipulate video frames.
- Learned how to utilize both the AWS Console and CLI for interacting with DynamoDB.
- Developed Python applications using the AWS SDK.
- Ability to work effectively both individually and as part of a team.