Fast attendance

Made by Алға Қазақстан

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Link to the github repository

Hello! We are Team Алға Қазақстан, and we would like to present our progress in the project.

Face Detection

In this step, we encountered an issue that remained unresolved from the previous stage. It involves the occasional occurrence of negative or blue color artifacts in images loaded by the cv2 library. Despite our efforts to rectify this problem by experimenting with various approaches, including utilizing the Pillow library, converting image formats, and seeking guidance from our TA, we were unable to find a definitive solution. Consequently, we have temporarily decided to postpone further investigation into this matter. Prior to releasing our application to customers, we intend to resolve this issue.

Face Recognition

During the training phase of our initial model, we identified the potential superiority of a siamese network model for our specific task. Face recognition often involves the need to identify or verify a person's face based on a single image or a few images. Siamese networks are particularly effective in one-shot learning scenarios, where they can learn to measure the similarity or dissimilarity between pairs of face images, even when the training data is limited. Additionally, they are also designed to be invariant to variations in lighting, pose, and expression, which is crucial in recognizing faces in different conditions. Subsequently, we replaced the model and successfully completed training for the analysis of specific facial features. The updated model can be found on our GitHub repository.

Web Application

Our web application development is almost complete. Currently, it comprises three main pages: the homepage, a registration page, and a page for uploading photos. The registration page is complete, however face recognition is not yet integrated. Instead, for now it just shows detected faces. In addition, we need to connect some database to store the metadata. We plan to store up to 10 images for each user. For future work, we plan to integrate some encoding techniques to maintain privacy.