Report

**Team members:**

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**Report**:

Our team collaborated on a face detection model using the Viola-Jones algorithm, with training done via the Cascade Trainer GUI tool. The project had three main stages: data collection, data cleaning and training, and finally, testing and validation.

In the first stage, Sokhibjon collected data from various sources. He assembled two types of images, positive images (faces) and negative images (non-faces) to form a comprehensive dataset. He also included team members’ face images to add variety and accuracy to the model.

The next stage was led by Shohruh, who focused on cleaning the dataset and training the model. After Sokhibjon gathered the images, Shohruh processed them by cropping out any areas that didn’t contain faces, ensuring that the model could focus on relevant features. He then used the Cascade Trainer GUI tool to train the model, applying the Viola-Jones method to make the model sensitive to face structures.

Finally, Mirsaid worked on testing and validating the model to confirm it was working correctly. He wrote code using the OpenCV (cv2) library to check the model’s effectiveness and conducted tests on various images. Through this process, he verified that the model could accurately detect faces in different lighting and angles, ensuring it met our project goals.

Each team member’s work was essential to achieving a successful outcome. Together, we created a reliable face detection model capable of identifying faces across diverse situations.