INFOMCV Assignment 5 Report

Student 1 – Student 2 (Group nr)

# architecture choices

*Explain briefly the architectural choices for your frame, optical flow and two-stream networks. Use model.summary(). Discuss layers and hyperparameters. Make sure you discuss the type of fusion in the two-stream network.(two pages)*

1. Frame CNN architecture:
2. Optical flow CNN architecture:
3. Combination into two-stream network:

# Results

## Include the (1) train-validation accuracy and (2) train-validation loss graphs for each of the four networks. Make sure train and validation lines have different colors in your graphs. The x-axis should cover the epochs, the y-axis should be accuracy (for (1)) or loss (for (2)). (two pages)

## Stanford 40 Frames

## HMDB51 Frames

## HMDB51 Optical flow

## HMDB51 Two-stream

## Result table

*Fill in the following table. Use torchsummary to obtain the number of parameters.*

1. Summary of your results per model

| Dataset | Model specifications | | | |
| --- | --- | --- | --- | --- |
| Model | Top-1 accuracy (train / test) | Top-1 loss train | Model parameters |
| Stanford 40 | Frames | 0.xxx / o.xxx | x.xxx | xx.xx |
| HMDB51 | Frames |  |  |  |
| HMDB51 | Optical flow |  |  |  |
| HMDB51 | Two-stream |  |  |  |

# Discussion of results

*Discuss the performance of your models, and compare the results between models. Explicitly discuss the training procedure, and risk of overfitting. (one column)*

# Link to Model Weights

*Make sure your link is accessible* [*form.ning@uu.nl*](mailto:form.ning@uu.nl) *and* [*r.w.poppe@uu.nl*](mailto:r.w.poppe@uu.nl)

# Choice Tasks

*Mention choice tasks, and include the results (when applicable) or a motivation how you implemented the choice tasks. (one page)*