Emotion Classification for SEP CV&DL

Tanja Jaschkowitz* Leah Kawka* Mahdi Mohammadi* Jiawen Wang*
{Tanja.Jaschkowitz,Leah.Kawka,Mahdi.Mohammadi,Jiawen.Wang}@campus.lmu.de

Hyperparameter	Configuration
Learning rate	{0.1, 0.01, 0.001, 0.0001}
Batch size	{8, 16, 32, 64}
Epoch	{20}
Dropout rate	{0.5}
Early stopping	{`True`, `False`}
Patience	{5}

Table 1. Explored hyperparameter space for our model

Abstract

The ABSTRACT [1].

1. Introduction

2. Related Work

3. Approach

3.1. Dataset

Firstly, for all the image data from the training dataset [1, 2], we transform and resize the images to `(64,64)`.

3.2. Model Architecture

We implemented a emotion-classification model with 3 convolution layers.

We add a `dropout` layer to prevent overfitting. We use the parameter grid from sklearn [2], in order to find the best hyperparameter configuration (see Tab. 1 for details) of the model.

3.3. Preliminary Results

[1] Equal contributions listed by alphabetical order of surnames, see Sec. 4 for details.

[2] https://scikit-learn.org/stable/modules/generated/sklearn.model_selection.ParameterGrid.html

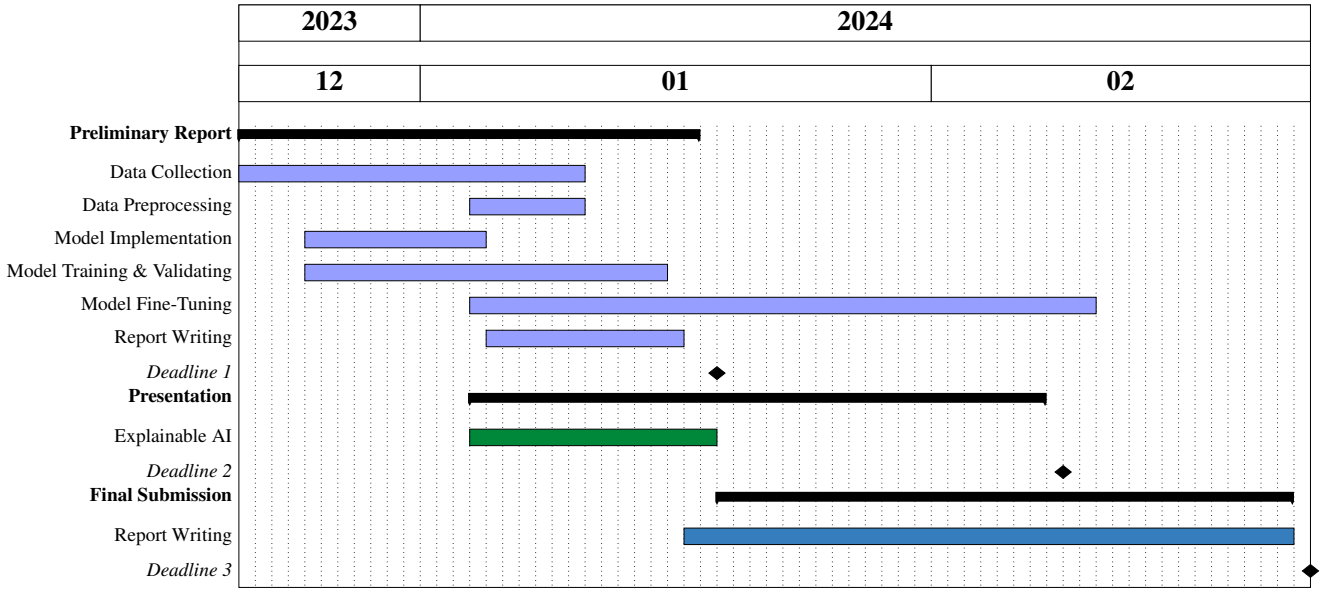

Figure 1. Overview of the time schedule on the final project

Emotion Classification for SEP CV&DL

Supplementary Material

4. Author Contributions

Every author contributed to the writing of the paper.

- **Tanja Jaschkowitz**
- **Leah Kawka** collected the training data
- **Mahdi Mohammadi**
- **Jiawen Wang** implemented the model architecture, training infrastructure, and optimization strategies.

Acknowledgement

We are deeply greatful to our advisors **Johannes Fischer** and **Ming Gui** for their helpful and valuable support. We also thank **Prof. Dr. Björn Ommer** for providing this intereating practical course.

References

[1] Shan Li and Weihong Deng. Reliable crowdsourcing and deep locality-preserving learning for unconstrained facial expression recognition. *IEEE Transactions on Image Processing*, 28 (1):356–370, 2019. 1

[2] Shan Li, Weihong Deng, and JunPing Du. Reliable crowdsourcing and deep locality-preserving learning for expression recognition in the wild. In *2017 IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, pages 2584–2593. IEEE, 2017. 1