CS485 Machine Learning for Computer Vision

Jaehan Jeong
20233933
fortes@kaist.ac.kr

Minhajur Rahman Chowdhury Mahim
20210753
minhaj@kaist.ac.kr

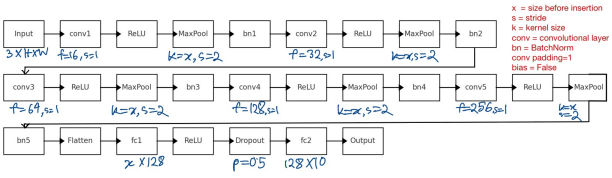

Figure 1. Meanface of face.mat

1. K-means Codebook

2. RF Classifier

3. RF Codebook

4. Convolutional Neural Networks

We begin with 2 convolutional neural networks described

References

[1] F. Pedregosa, G. Varoquaux, A. Gramfort, V. Michel, B. Thirion, O. Grisel, M. Blondel, P. Prettenhofer, R. Weiss, V. Dubourg, J. Vanderplas, A. Passos, D. Cournapeau, M. Brucher, M. Perrot, and E. Duchesnay. Scikit-learn: Machine learning in python. *Journal of Machine Learning Research*, 12:2825–2830, 2011. 1

Appendix

Environment Control for Convolutional Neural Networks

All the tasks for this section have been performed in Google Collaboratory on NVIDIA V100. And to preserve resources, the epoch for all trials and models was set to 15 unless stated otherwise.

Default Parameters for Training Convolutional Neural Networks

Parameter	Default Value
bootstrap	True
ccp_alpha	0.0
class_weight	None
criterion	entropy
max_depth	None
max_features	auto
max_leaf_nodes	None
max_samples	None
min_impurity_decrease	0.0
min_samples_leaf	2
min_samples_split	2
min_weight_fraction_leaf	0.0
n_estimators	100
n_jobs	None
oob_score	False
random_state	42
verbose	0
warm_start	False

Table 1. Default Parameters of Random Forest Classifier [1] If Not Changed