PA2 Report

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1 Introduction

This report contains the summary of classic classifier matlab implementation and experiments.

* Input/Output format 이 정해져 있지 않아 **제공된 데이터 형식에 대해서** 동작하도록 작성하였습니다.

(트레이닝 데이터 TRAIN_DATA/black and white/character data001.bmp,

테스트 글자 데이터 VALID_DATA/CharA.bmp

테스트 단어 데이터 VALID_DATA/word data001.bmp)

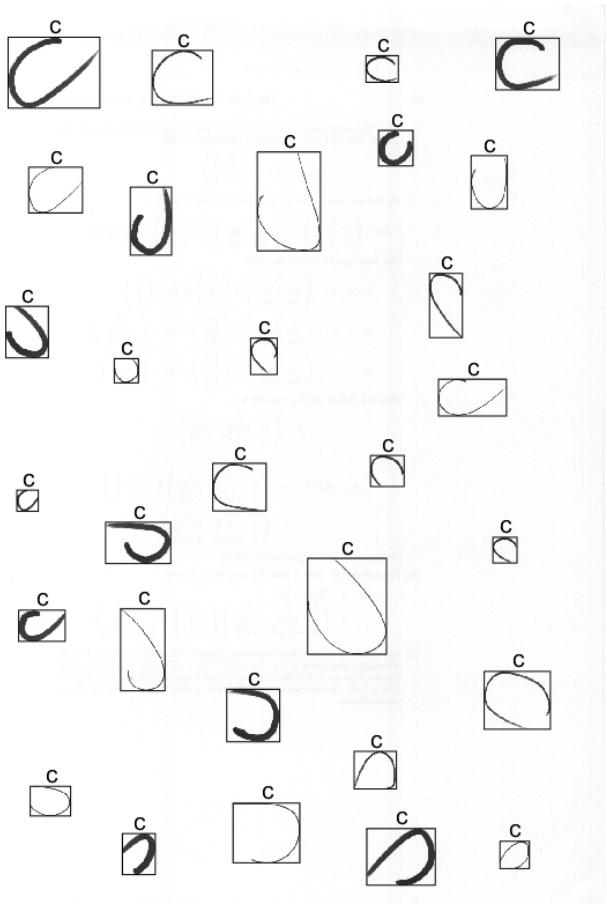
2 Implementation

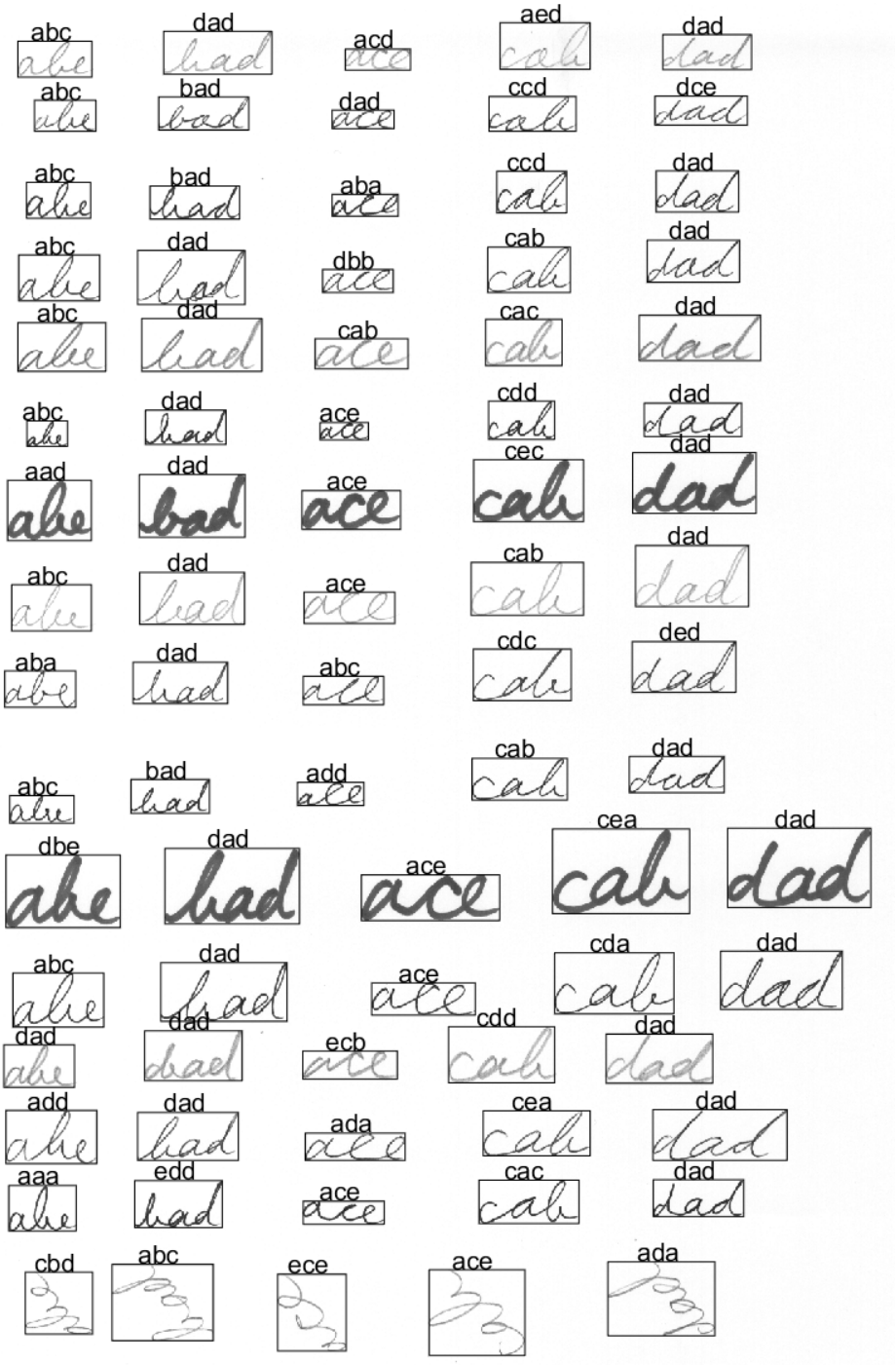
Extract each character parts of the training data and save it as a frame. After that, calculate the cross correlation between the training data and the test data by rotating the image. Based on that, find the nearest characters and rank those classes. Finally, the classifier decide the highest ranked class.

* The word data has the label so we can calculate the accuracy automatically, but in the case of the word, there is no way to give the ground truth label so there is not evaluation code for the word data.

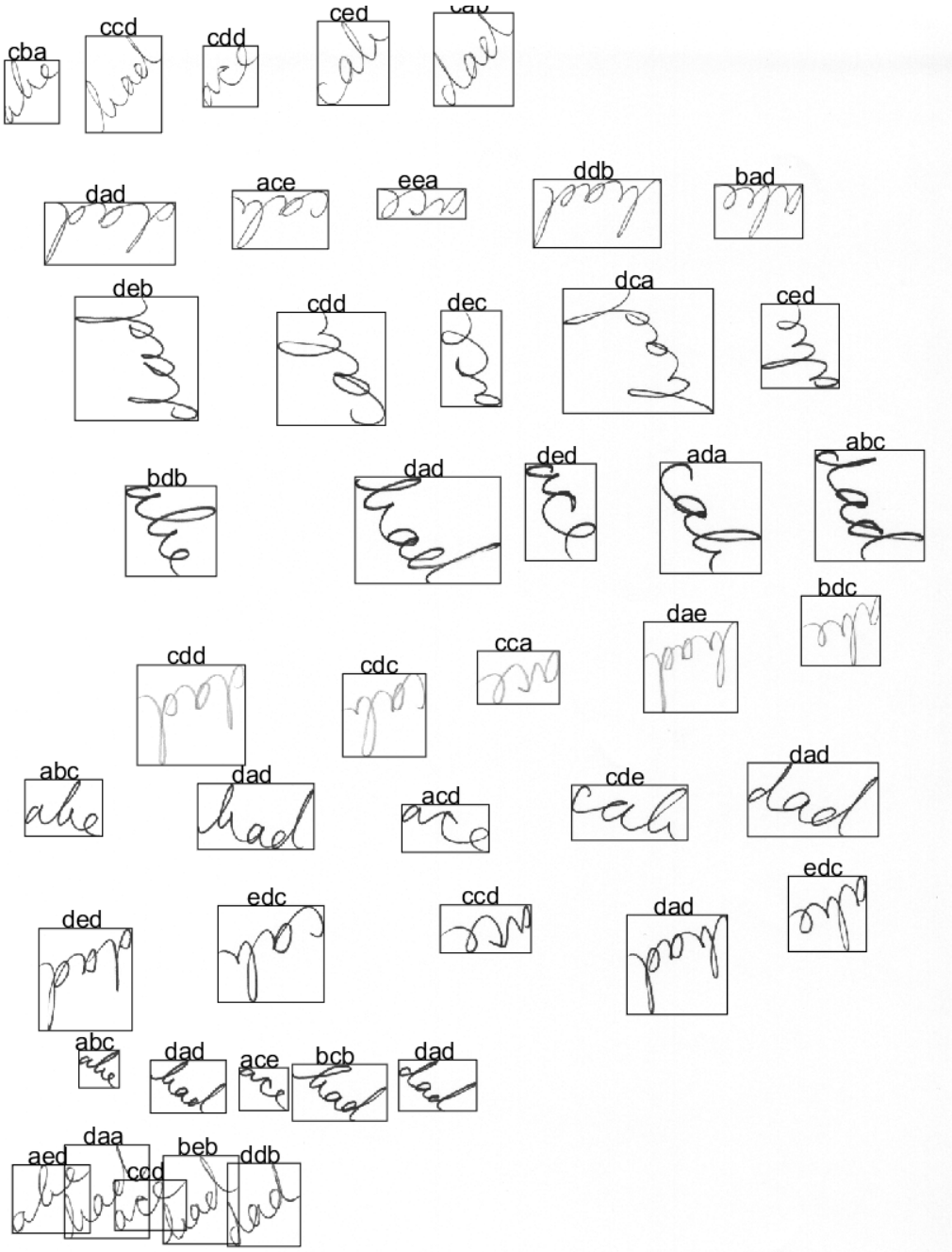
3 Result

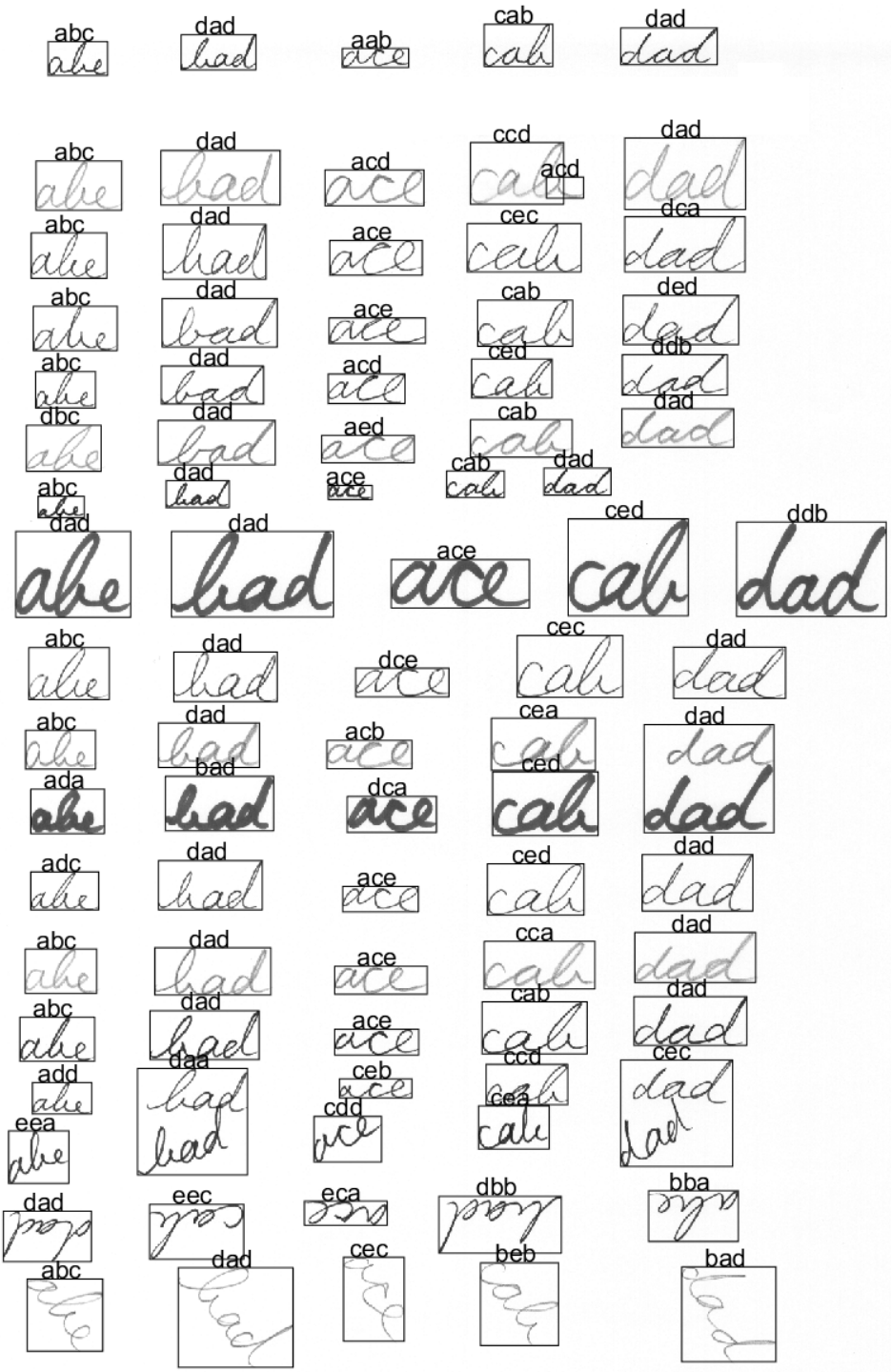
The error number of the prediction
Err_A = 1
Err_B = 4
Err_C = 0
Err_D = 5
Err_E = 2
Total Error rate = 10.0%

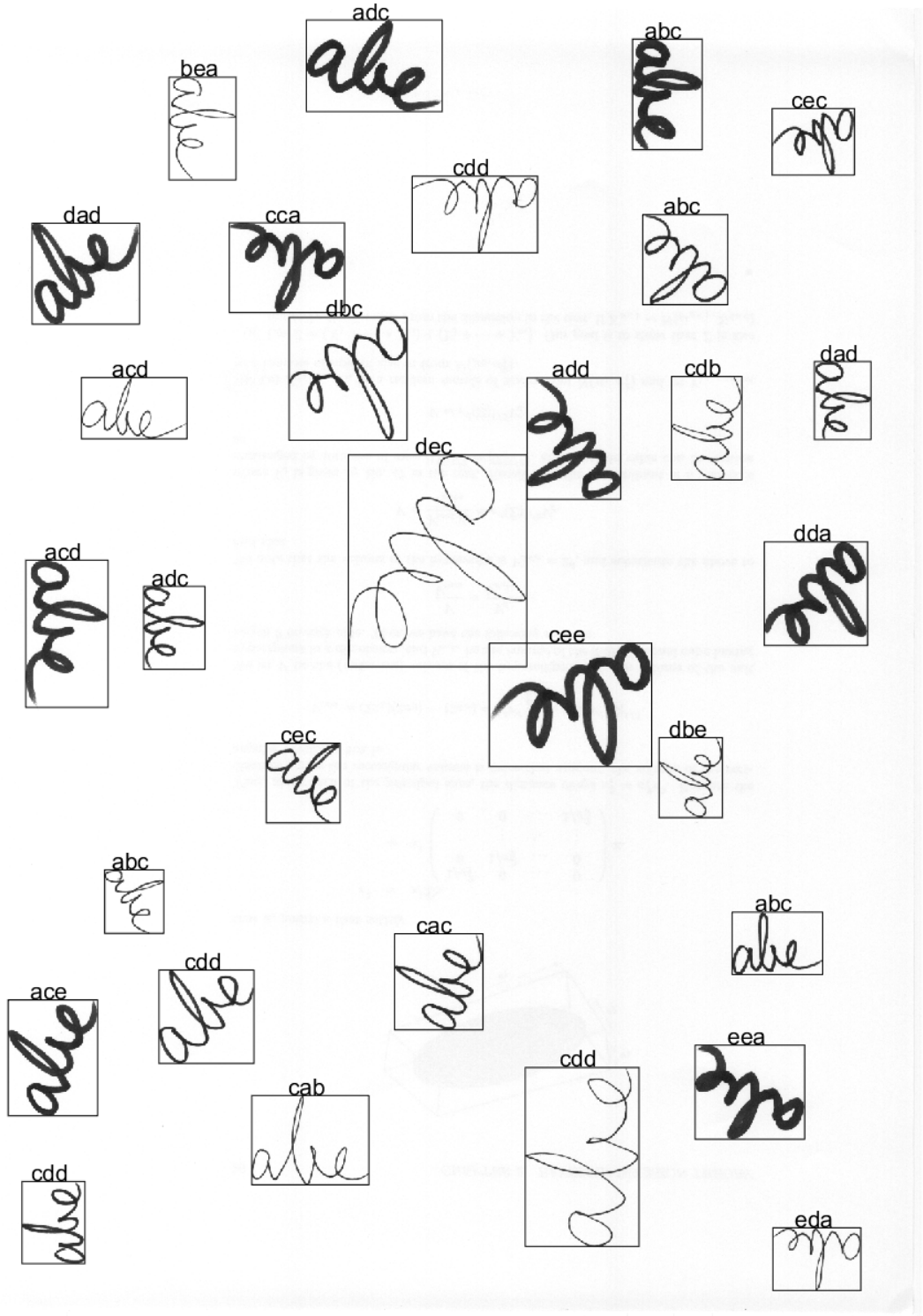




Number of error prediction
abc : 7/16
bad: 13/16
ace: 9/16
cab: 13/16
dad: 3/16
Total: 45/80,
Error rate = 56.25%
evaluation code for the word data.
Following is the result of the other test data.


cba
ccd
cdd
ced
dad
ace
eea
ddb
bad
deb
cdd
dec
dca
ced
bdb
dad
ded
ada
abc
bdc
dae
cdd
cdc
cca
abc
dad
acd
cde
dad
edc
ded
edc
ccd
dad
abc
dad
ace
bcb
dad
aed
daa
ccd
beb
ddb


abc
dad
aab
cab
dad
abc
dad
acd
ccd
acd
dad
abc
dad
ace
cec
dca
abc
dad
ace
cab
ded
abc
dad
acd
ced
ddb
dbc
dad
aed
cab
dad
abc
dad
ace
cab
dad
dad
dad
ace
ced
ddb
abc
dad
dce
cec
dad
abc
dad
acb
cea
dad
ada
bad
dca
ced
adc
dad
ace
ced
dad
abc
dad
ace
cca
dad
abc
dad
ace
cab
dad
add
daa
ceb
ccd
cec
eea
cdd
cea
dad
eec
eca
dbb
bba
abc
dad
cec
beb
bad


adc
abc
bea
cec
cdd
dad
cca
abc
dbc
acd
add
cdb
dad
dec
dda
acd
adc
cee
cec
dbe
abc
abc
cac
cdd
ace
eea
cdd
cab
cdd
eda