

LDA, Decision Trees, and Extra Trees

on the MNIST and Yale B Datasets

Kudiyar Orazymbetov, Nico Casale

NCSU

2017/04/23

outline

- 1 introduction
- 2 decision trees
- 3 extra trees
- 4 linear discriminant analysis (LDA)
- 5 results
- 6 conclusion

motivation

-
- applications:

datasets

Modified National Institute of Standards and Technology (MNIST) database

- source: Yann LeCun et al. [1]
-

Yale Extended Face Database B

- source: Yale University [2]
-

progress

- 1 introduction
- 2 **decision trees**
- 3 extra trees
- 4 linear discriminant analysis (LDA)
- 5 results
- 6 conclusion

progress

- 1 introduction
- 2 decision trees
- 3 extra trees**
- 4 linear discriminant analysis (LDA)
- 5 results
- 6 conclusion

progress

- 1 introduction
- 2 decision trees
- 3 extra trees
- 4 linear discriminant analysis (LDA)
- 5 results
- 6 conclusion

conclusion

- intuition and heuristics needed for each algorithm
- choice of algorithm depends on features of interest
- future work:
 - alternative distance metrics
 - normalize input data
 - parallelize algorithms

references



Yann LeCun and Corinna Cortes.
MNIST handwritten digit database.
2010.



Yale face database b.

thanks!