

IKR

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Images Classification

- ▶ SGD (Stochastic Gradient Search)
 - ▶ linear classifier with SGD
 - ▶ iterative method for minimizing an objective
 - ▶ loss functions—log, huber, hinge
- ▶ Random Forest Ensemble
- ▶ cross validation
- ▶ data augmentation

Cross Validation

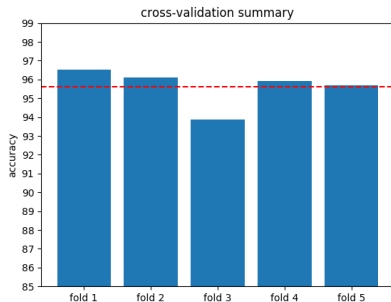
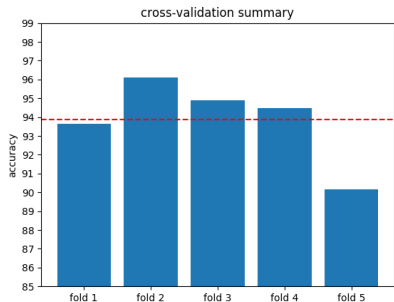
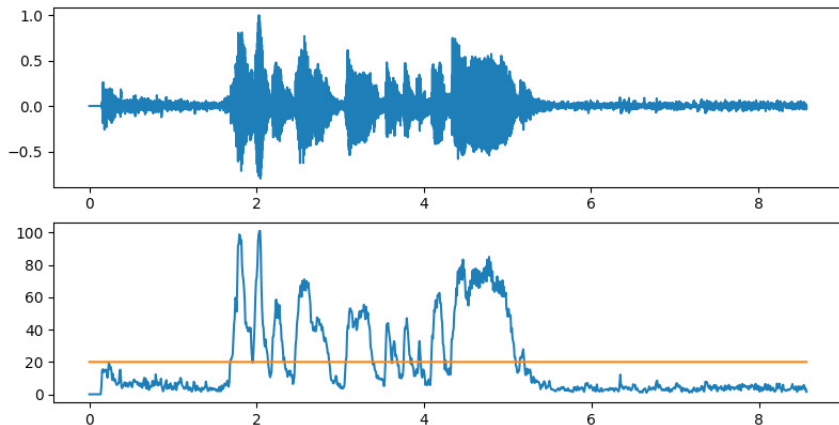


Figure 1: SGD classifier on the left, and Random Forest on the right. The red dashed line is the mean accuracy of all models.

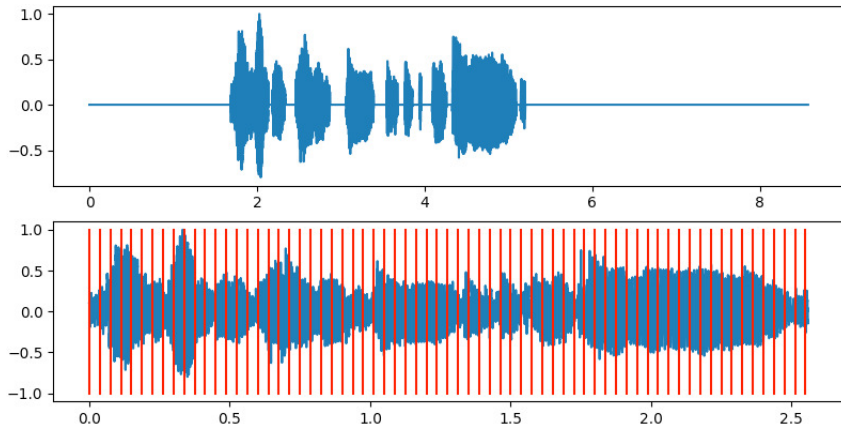
Audio Classification

- ▶ Deep neural network – $\{128, 64\}$ fully connected inner neurons
- ▶ Tensorflow



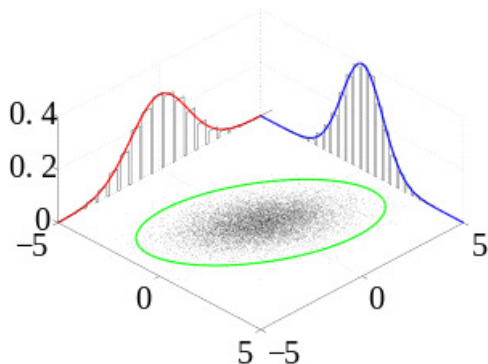
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Audio Classification

- ▶ GMM – EM algorithm for training Gaussian Mixture Model
- ▶ run in loop with variable parameters
- ▶ saving currently the best model



Other Approaches

- ▶ deep learning
- ▶ image preprocessing (SIFT)
- ▶ massive data augmentation
- ▶ grid search