Machine Learning (ML) solved MCQs

« Set 10 **11** of **31** Set 12 »

251. True or False: Ensemble learning can only be applied to supervised learning methods.

A. true

B. false

B.false discuss

252. True or False: Ensembles will yield bad results when there is significant diversity among the models.Note: All individual models have meaningful and good predictions.

A. true

B. false

B.false discuss

253. Which of the following is / are true about weak learners used in ensemble model?
1. They have low variance and they don't usually overfit
2. They have high bias, so they can not solve hard learning problems
3. They have high variance and they don't usually overfit

D. none of these

discuss

A.1 and 2

254. True or False: Ensemble of classifiers may or may not be more accurate than any of its individual model.

A. true

B. false

discuss

A.true

255. If you use an ensemble of different base models, is it necessary to tune the hyper parameters of all base models to improve the ensemble performance?

A. yes

B. no

C. can’t say

discuss

B.no

256. Generally, an ensemble method works better, if the individual base models have _____?Note: Suppose each individual base models have accuracy greater than 50%.

A. less correlation among predictions

B. high correlation among predictions

C. correlation does not have any impact on ensemble output

D. none of the above

discuss

A.less correlation among predictions

257. In an election, N candidates are competing against each other and people are voting for either of the candidates. Voters don’t communicate with each other while casting their votes. Which of the following ensemble method works similar to above-discussed election procedure?

Hint: Persons are like base models of ensemble method.

A. bagging

B. boosting

C. a or b

D. none of these

discuss

A.bagging

258. Suppose there are 25 base classifiers. Each classifier has error rates of e = 0.35.
Suppose you are using averaging as ensemble technique. What will be the probabilities that ensemble of above 25 classifiers will make a wrong prediction?
Note: All classifiers are independent of each other

A. 0.05

B. 0.06

C. 0.07

D. 0.09

discuss

259. In machine learning, an algorithm (or learning algorithm) is said to be unstable if a small change in training data cause the large change in the learned classifiers.True or False: Bagging of unstable classifiers is a good idea

A. true

B. false

discuss

A.true

260. Which of the following parameters can be tuned for finding good ensemble model in bagging based algorithms?
1. Max number of samples
2. Max features
3. Bootstrapping of samples
4. Bootstrapping of features

A. 1 and 3

B. 2 and 3

C. 1 and 2

D. all of above

discuss

D.all of above

261. How is the model capacity affected with dropout rate (where model capacity means the ability of a neural network to approximate complex functions)?

A. model capacity increases in increase in dropout rate

B. model capacity decreases in increase in dropout rate

C. model capacity is not affected on increase in dropout rate

D. none of these

discuss

B.model capacity decreases in increase in dropout rate

262. True or False: Dropout is computationally expensive technique w.r.t. bagging

A. true

B. false

discuss

B.false

263. Suppose, you want to apply a stepwise forward selection method for choosing the best models for an ensemble model. Which of the following is the correct order of the steps?
Note: You have more than 1000 models predictions
1. Add the models predictions (or in another term take the average) one by one in the ensemble which improves the metrics in the validation set.
2. Start with empty ensemble
3. Return the ensemble from the nested set of ensembles that has maximum performance on the validation set

A. 1-2-3

B. 1-3-4

C. 2-1-3

D. none of above

D.none of above

discuss

264. Suppose, you have 2000 different models with their predictions and want to ensemble predictions of best x models. Now, which of the following can be a possible method to select the best x models for an ensemble?

A. step wise forward selection

B. step wise backward elimination

C. both

D. none of above

C. both

discuss

265. Below are the two ensemble models:
1. E1(M1, M2, M3) and
2. E2(M4, M5, M6)
Above, Mx is the individual base models.
Which of the following are more likely to choose if following conditions for E1 and E2 are given?

B. e2

C. any of e1 and e2

D. none of these

B.e2 discuss

266. True or False: In boosting, individual base learners can be parallel.

A. true

B. false

B.false discuss

267. Which of the following is true about bagging?
1. Bagging can be parallel
2. The aim of bagging is to reduce bias not variance
3. Bagging helps in reducing overfitting

A. 1 and 2

B. 2 and 3

C. 1 and 3

D. all of these

C.1 and 3 discuss

268. Suppose you are using stacking with n different machine learning algorithms with k folds on data.

Which of the following is true about one level (m base models + 1 stacker) stacking?

Note:
Here, we are working on binary classification problem
All base models are trained on all features
You are using k folds for base models

A. you will have only k features after the first stage

B. you will have only m features after the first stage

C. you will have k+m features after the first stage

D. you will have k*n features after the first stage

B.you will have only m features after the first stage discuss

269. Which of the following is the difference between stacking and blending?

A. stacking has less stable cv compared to blending

B. in blending, you create out of fold prediction

D.none of these

discuss

270. Which of the following can be one of the steps in stacking?
1. Divide the training data into k folds
2. Train k models on each k-1 folds and get the out of fold predictions for remaining one fold
3. Divide the test data set in “k” folds and get individual fold predictions by different algorithms

A. 1 and 2

B. 2 and 3

C. 1 and 3

D. all of above

A.1 and 2

discuss

271. Q25. Which of the following are advantages of stacking?
1) More robust model
2) better prediction
3) Lower time of execution

A. 1 and 2

B. 2 and 3

C. 1 and 3

D. all of the above

A.1 and 2

discuss

272. Which of the following are correct statement(s) about stacking?
A machine learning model is trained on predictions of multiple machine learning models
A Logistic regression will definitely work better in the second stage as compared to other classification methods
First stage models are trained on full / partial feature space of training data

A. 1 and 2

B. 2 and 3

C. 1 and 3

D. all of above

C.1 and 3

discuss

273. Which of the following is true about weighted majority votes?

A. 1 and 3

B. 2 and 3

C. 1 and 2

D. 1, 2 and 3

D.1, 2 and 3 discuss

274. Which of the following is true about averaging ensemble?

A. it can only be used in classification problem

B. it can only be used in regression problem

C. it can be used in both classification as well as regression

D. none of these

C.it can be used in both classification as well as regression discuss

275. How can we assign the weights to output of different models in an ensemble?
1. Use an algorithm to return the optimal weights
2. Choose the weights using cross validation
3. Give high weights to more accurate models

A. 1 and 2

B. 1 and 3

C. 2 and 3

D. all of above

D.all of above discuss

« Set 10 Set 12 »

1	2	3	4	5	6	7	8	9	10	11	12	13	14
15	16	17	18	19	20	21	22	23	24	25	26	27	
28	29	30	31										

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