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# Lista09 – IA

## 01)

OPTIONS
attributeNamePrefix -- Prefix for the created attribute names. (default: "")

stopwordsHandler -- The stopwords handler to use (Null means no stopwords are used).

wordsToKeep -- The number of words (per class if there is a class attribute assigned) to attempt to keep.

debug -- If set to true, filter may output additional info to the console.

outputWordCounts -- Output word counts rather than boolean 0 or 1(indicating presence or absence of a word).

lowerCaseTokens -- If set then all the word tokens are converted to lower case before being added to the dictionary.

tokenizer -- The tokenizing algorithm to use on the strings.

doNotCheckCapabilities -- If set, the filter's capabilities are not checked before it is built. (Use with caution to reduce runtime.)

doNotOperateOnPerClassBasis -- If this is set, the maximum number of words and the minimum term frequency is not enforced on a per-class basis but based on the documents in all the classes (even if a class attribute is set).

attributeIndices -- Specify range of attributes to act on. This is a comma separated list of attribute indices, with "first" and "last" valid values. Specify an inclusive range with "-". E.g: "first-3,5,6-10,last".

normalizeDocLength -- Sets whether if the word frequencies for a document (instance) should be normalized or not.

saveDictionaryInBinaryForm -- Save the dictionary as a binary serialized java object instead of in plain text form.

invertSelection -- Set attribute selection mode. If false, only selected attributes in the range will be worked on; if true, only non-selected attributes will be processed.

minTermFreq -- Sets the minimum term frequency. This is enforced on a per-class basis.

TFTransform -- Sets whether if the word frequencies should be transformed into log(1+fij) where fij is the frequency of word i in document (instance) j.

periodicPruning -- Specify the rate (x% of the input dataset) at which to periodically prune the dictionary. wordsToKeep prunes after creating a full dictionary. You may not have enough memory for this approach.

stemmer -- The stemming algorithm to use on the words.

dictionaryFileToSaveTo -- The path to save the dictionary file to - an empty path or a path '-- set me --' means do not save the dictionary.

IDFTransform -- Sets whether if the word frequencies in a document should be transformed into:
fij*log(num of Docs/num of Docs with word i)
where fij is the frequency of word i in document (instance) j.

## 02)

TF (“Este”, D1) = 1/5 = 0,2

TF (“Este”, D2) = 1/4 = 0,25 IDF(“Este”) = log(3/3) = 0

TF (“Este”, D3) = 1/6 = 0,17

TF (“Este”, D1) x IDF (“Este”) = 0,2 x 0 = 0

TF (“Este”, D2) x IDF (“Este”) = 0,25 x 0 = 0

TF (“Este”, D3) x IDF (“Este”) = 0,17 x 0 = 0

TF(“outro ”, D1 ) = 0/5 = 0

TF(“outro ”, D2 ) = 0/4 = 0

TF(“outro ”, D3 ) = 1/6 = 0,17

IDF(“outro ”) = log(3/1 ) = 0,48

TF(“outro ”, D1 ) x IDF outro ””) = 0 x 0,48 = 0

TF(“outro ”, D2 ) x IDF outro ””) = 0 x 0,48 = 0

TF(“outro ”, D3 ) x IDF outro ””) = 0,17 x 0,48 = 0,08

TF(“A”, D1) = 1/5 = 0,2

TF(“A”, D2) = 0/4 = 0

TF(“A”, D3) = 2/6 = 0,33

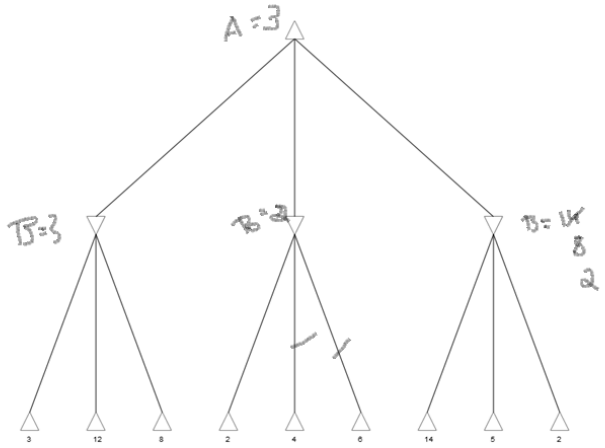
IDF(“A”) = log(3/2) = 0,18

TF(“A”, D1) x IDF (“A”) = 0,2 x 0,18 = 0,036

TF(“A”, D2) x IDF (“A”) = 0 x 0,18 = 0

TF(“A”, D3) x IDF (“A”) = 0,33 x 0,18 = 0,06

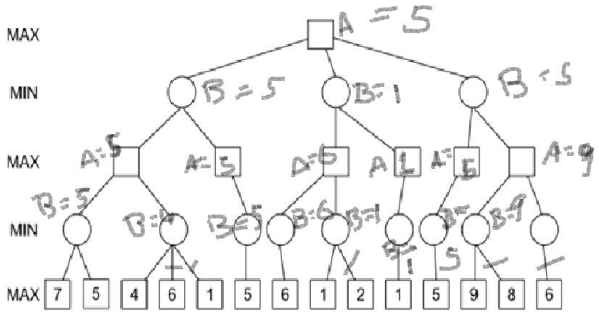
03)




04)

Haverá corte nos nós 4 e 6.

05)




06)

Q- A ^ B

W- A -> B

X- B -> A

Aa- (A -> B) ^A -> B

Bb- ((A -> B) ^ ~ B) -> ~A

Cc- ((~A^B)^~B) -> A

Dd- (~A ->B)^(A v B)

Ee- ((A -> B) ^(B-> C)) -> (A -> C)

Ff- (A <->(B v C))- > (A -> B)

Gg- ((A <->(B v C)) ^ ~A)  - > (~B v ~C)

Hh- ((A <-> B v C)^~B) -> ~A

Ii-(A ^(B->C))->B

Jj- ((~A v ~B) ^ (~A -> C) ^ (~B -> D)) -> C v D

Oo- A v B

Qq- P

Ss- P

07)

1- A

4- E

5- A

7- A

8- B

9- E

13- C

16- D

17- E

19- B

20- B

21- C

23- B

24- C

26- D

27- C

28- A

31- E

32- A

08) D

09) E

10) C

11) B

12) B

13)

1- P

2- P

3- P

4- P^Q ->A

5- P^Q

6- P-> M

14)

A- A

B- B

C- C

D- D

E- E v F

F- G

G- ~G -> H

H- I

15)

A- A

B- B

C- C

D- D

E- V->E

F- F

G- G

H- H -> ~M

I- M

16)

1- A

2- B

3- C

4- D^E

5- F