# Lista 7

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Exercícios:

Calcule a classificação usando modelo vetorial e aplique o algoritmo de

Rocchio em seguida. Considere como relevantes os dois melhores

classificados e como irrelevantes os outros dois.

A)

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| Termos | IDF | TF.IDF | | | |
| Doc1 | Doc2 | Doc3 | Doc4 |
| bom | 0.45 | 1,49 | 1,42 | 2,43 | 1.56 |
| errado | 0.67 | 1,28 | 0,69 | 1,70 | 2.43 |

vdoc1=(1,49, 1,28) mvdoc1=1,96 nvdoc1=(1,49/1.96, 1,28/1,96)=(0,75, 0,65)

vdoc2=(1,42, 0,69) mvdoc2=1,58 nvdoc2=(0,90, 0,44)

Vdoc3=(2,43, 1,70) mvdoc3=2,96 nvdoc3=(0,82, 0,57)

Vdoc4=(1,56, 2,43) mvdoc4=2,89 nvdoc4=(0,54, 0,84)

Vcons=(0,45, 0,67) mvcons=0,81 nvcons=(0,55, 0,83)

Cos1=0,95 2o

Cos2=0,86 4o

Cos3=0,92 3o

Cos4=0,99 1o

Rocchio

Cr=(1,49+1,56, 1,28+2,43)/2=(1,52, 1,85)

Ci=( 1,42+2,43 , 0,69+1,70)/2=(1,92, 1,19)

VD=(1,52-1,92, 1,85-1,19)=(-0,40, 0,66)

Vconsrocchio=(0,45-0,40, 0,67+0,66)=(0,05, 1,33) m=1,33 nvconsrocchio=(0,04, 1)

Considerar nconsrocchio como (0,04, 1)

2º Cos1=0,04\*0,75+1\* 0,65=0,68

4º Cos2=0,04\*0,90 + 1\* 0,44=0,48

3º Cos3=0,04\*0,82 + 1\*0,57=0,60

1º Cos4=0,04\*0,54 + 1\*0,84=0,86

B)

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| Termos | IDF | TF.IDF | | | |
| Doc1 | Doc2 | Doc3 | Doc4 |
| bom | 0,35 | 1,22 | 4,84 | 2,44 | 3,41 |
| errado | 0,86 | 3,54 | 8,47 | 1,45 | 5,14 |

vdoc1= (1.22, 3.54) mvdoc1= 3.74 nvdoc1= (1.22/3.74, 3.54/3.74)= (0.32, 0.94)

vdoc2= (4.84, 8.47) mvdoc2= 9.75 nvdoc2= (4.84/9.75, 8.47/9.75)= (0.49, 0.86)

vdoc3= (2.44, 1.45) mvdoc3= 2.83 nvdoc3= (2.44/2.83, 1.45/2.83)= (0.86, 0.51)

vdoc4= (3.41, 5.14) mvdoc4= 6.16 nvdoc4= (3.41/6.16, 5.14/6.16)= (0.55, 0.83)

Vcons= (0.35, 0.86) mvcons= 0.92 nvcons=(0.35/0.92, 0.86/0.92)= (0.38, 0.93)

Cos1= 0.99 1o

Cos2= 0.986 2o

Cos3= 0.80 4o

Cos4= 0.980 3o

Rocchio

Cr= (1.22+4.84, 3.54+8.47)/2 = (3.03, 6.00)

Ci= (3.41+2.44, 5.14+1.45)/2 = (2.92, 3.29)

VD= (3.03-2.92, 6.00-3.29) = (0.11, 2.71)

Vconsrocchio=(0.35+0.11, 0.86+2.71) = (0.46, 3.57) m=3.60 pra achar m

nvconsrocchio= (0.13, 0.99)

1º Cos1 = 0.13\*0.32 + 0.99\*0.94 = 0.97

2º Cos2 = 0.13\*0.49 + 0.99\*0.86 = 0.91

4º Cos3 = 0.13\*0.86 + 0.99\*0.51 = 0.61

3º Cos4 = 0.13\*0.55 + 0.99\*0.83 = 0.89

C)

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| Termos | IDF | TF.IDF | | | |
| Doc1 | Doc2 | Doc3 | Doc4 |
| bom | 0,75 | 1,48 | 2,45 | 1,85 | 0,95 |
| errado | 0,50 | 3,45 | 1,58 | 4,58 | 7,45 |

Vdoc1 = (1.48, 3.45) mvdoc1 = 3.75 nvdoc1 (1.48/3.75, 3.45/3.75) = (0.39, 0.92)

Vdoc2 = (2.45, 1.58) mvdoc2 = 2.91 nvdoc2 = (0.84, 0.54)

Vdoc3 = (1.85, 4.58) mvdoc3 = 4.94 nvdoc3 = (0.37, 0.93)

Vdoc4 = (0.95, 7.45) mvdoc4 = 7.51 nvdoc4 = (0.12, 0.99)

Vcons = (0.75, 0.50) mvcons = 0.90 nvcons = (0.83, 0.55)

Cos1 = 0.829 2o

Cos2 = 0.994 1o

Cos3 = 0.818 3o

Cos4 = 0.644 4o

Rocchio

Cr= (2.45+1.48, 1.58+3.45)/2 = (1.96, 2.51)

Ci= (1.85+0.95, 4.58+7.45)/2 = (1.4, 6,01)

VD= (0.56, -3.5)

Vconsrocchio= (0.75+0.56, 0.50-3.5)= (1.31, -3) m=3.27

nvconsrocchio= (0.40, -0.92)

3º Cos1 = (0.40\*0.39 + (-0.92\* 0.92) = 0.69

4º Cos2 = (0.40\*0.84 + (-0.92\* 0.54) = 0.16

2º Cos3 = (0.40\*0.37 + (-0.92\* 0.93) = 0.70

1º Cos4 = (0.40\*0.12 + (-0.92\* 0.99) = 0.86