

Web Intelligence and Big Data

Homework 2

# instances	Tweet / Comment	Sentiment
2000	My phone is really bad and gives me lots of trouble	negative
5000	I really like my phone because it helps me enjoy life	positive
5000	My new phone is a pleasure to use and very nice	positive
3000	I hate this phone, it is making my life miserable	negative

total: 15.000

$$p(+)=10.000/15.000=0,6666$$

$$p(-)=5.000/15.000=0,3333$$

Positive: 10.000

Negative: 5.000

$$p(\text{bad}|+)=1/10.000=0,0001; p(\text{bad}|-) = 2.000/5.000=0,40$$

$$p(\text{trouble}|+)=1/10.000=0,0001; p(\text{trouble}|-) = 2.000/5.000=0,40$$

$$p(\text{like}|+)=5.000/10.000=0,5; p(\text{like}|-) = 1/5.000=0,0002$$

$$p(\text{enjoy}|+)=5.000/10.000=0,5; p(\text{enjoy}|-) = 1/5.000=0,0002$$

$$p(\text{pleasure}|+)=5.000/10.000=0,5; p(\text{pleasure}|-) = 1/5.000=0,0002$$

$$p(\text{nice}|+)=5.000/10.000=0,5; p(\text{nice}|-) = 1/5.000=0,0002$$

$$p(\text{hate}|+)=1/10.000; p(\text{hate}|-) = 3.000/5.000=0,6$$

$$p(\text{miserable}|+)=1/10.000; p(\text{miserable}|-) = 3.000/5.000=60\%$$

$$P(A|B) \cdot P(B) = P(B|A) \cdot P(A)$$

“the new Y777 appears nice but is a lot of trouble”

“the new Y777 is really nice even though it gives trouble sometimes”

“I really like my new K677, it is a pleasure to use”

“the K677 is a really bad phone and I hate it”