K-Oil

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The prior $P(c) = \frac{N_i}{N_{doc}}$.

$P(-) = 3/5$, $P(+) = 2/5$

*- Naive Bayes doesn't employ unknown word model.

$P(\text{"predictable"}|-) = \frac{1+1}{14+20} = 2/34$ $P(\text{"predictable"}|+) = \frac{0+1}{9+20} = 1/29$.

$P(\text{"no"}|-) = \frac{1+1}{14+20} = 2/34$ $P(\text{"no"}|+) = \frac{0+1}{9+20} = 1/29$.

$P(\text{"fun"}|-) = \frac{0+1}{14+20} = \frac{1}{34}$ $P(\text{"fun"}|+) = \frac{1+1}{9+20} = 2/29$

For "predictable with no fun" we can compute:

$P(-)P(S|-) = \frac{3}{5} \times \frac{2 \times 2 \times 1}{34^3} = 0.061 \times 10^{-3}$

$P(+)P(S|+) = \frac{2}{5} \times \frac{1 \times 1 \times 2}{29^3} = 0.032 \times 10^{-3}$.

The predicted class is negative for the test sentences.