BD Lab Task

Training

- → Just plain boring (-ve)
- → Entirely predictable & lacks energy (-ve)
- → No surprises and very few laughs (-ve)
- → Very powerful (+ve)
- → The most fun film of the summer (+ve)

Testing

- → Predictable with no fun (?)

$P(-ve) = 3/5 \qquad P(+ve) = 2/5$

$P(\text{predictable}/-ve) = \frac{1+1}{14+20} = \frac{2}{34} = \frac{1}{17}$

$P(\text{with}/-ve) = \frac{0+1}{14+20} = \frac{1}{34}$

$P(\text{no}/-ve) = \frac{1+1}{14+20} = \frac{1}{17}$

$P(\text{fun}/-ve) = \frac{0+1}{14+20} = \frac{1}{34}$

$P(\text{predictable}/+ve) = 1/33$

$P(\text{with}/+ve) = 1/33$

$P(\text{no}/+ve) = 1/33$

$P(\text{fun}/+ve) = 2/33$

$P(+ve/\text{test}) = P(\text{pred.}/+ve) \times P(\text{with}/+ve) \times P(\text{no}/+ve) \times P(\text{fun}/+ve) \times P(+ve)$

$= \frac{1}{33} \times \frac{1}{33} \times \frac{1}{33} \times \frac{2}{33} \times \frac{2}{5} = 0.00000007$

$P(-ve/\text{test}) = P(\text{pred.}/-ve) \times P(\text{with}/-ve) \times P(\text{no}/-ve) \times P(\text{fun}/-ve) \times P(-ve)$

$= \frac{1}{17} \times \frac{1}{34} \times \frac{1}{17} \times \frac{1}{34} \times \frac{3}{5} = 0.000002$

∴ Final cat will be negative.

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