The octopus genome and the evolution of cephalopod neural and morphological novelties

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Journal Club, 2016-02-17

This is the first slide

This is the second slide

A bit more information about this

Bayes' theorem

My attempt at an explanation[1]

$$P(A \mid B) = \frac{P(A) \times P(B \mid A)}{P(B)} \tag{1}$$

$$Posterior = \frac{Prior \times Likelihood}{Evidence} \tag{2}$$

$$f(t, r \mid D) = \frac{f(t)f(r \mid t) \times L(D \mid t, r)}{Z} \tag{3}$$

[1] Taken from ŷhat | Naive Bayes in Python

My Attempt
A quick test of frequencies

H_0: Asymmetrically fast evolving genes occur with equal frequency to symmetric fast evolving genes.
H_1: Frequencies are not equal.

```
binom.test(72, 76, p=.5)
```

Exact binomial test
data: 72 and 76
number of successes = 72, number of trials = 76, p-value $< 2.2 \times 10^{-16}$
alternative hypothesis: true probability of success is not equal to 0.5
95 percent confidence interval:
0.8706908 0.9854754
sample estimates:
probability of success
0.9473684

Thanks for listening