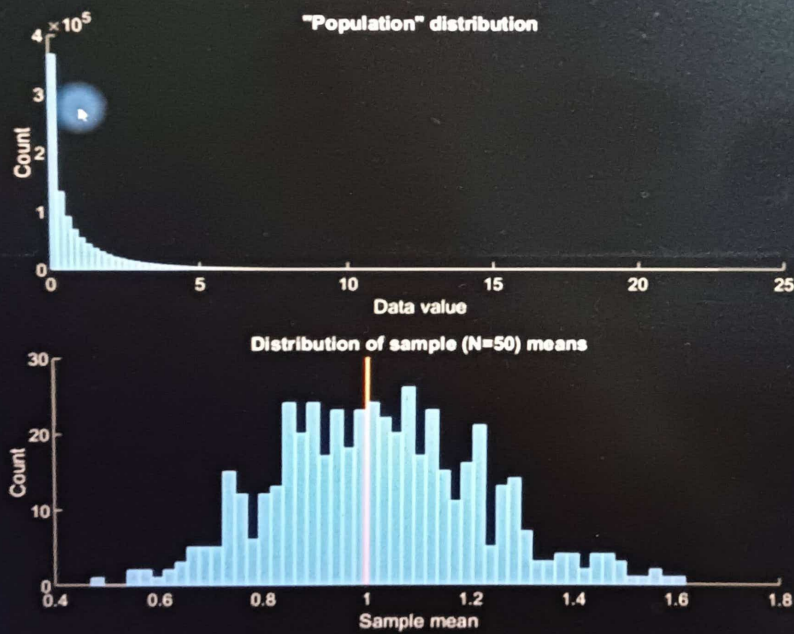


Distributions under the null and alternative hypotheses

In this video, you will learn

- More about sample estimates distributions.
- How sampling variability and noise contribute to hypothesis distributions.
- **THE BASIS OF ALL INFERENCE STATISTICS.**

Reminder about distributions of estimates



Creating a null hypothesis distribution

Scientific question: Are giraffes taller than giraffes?

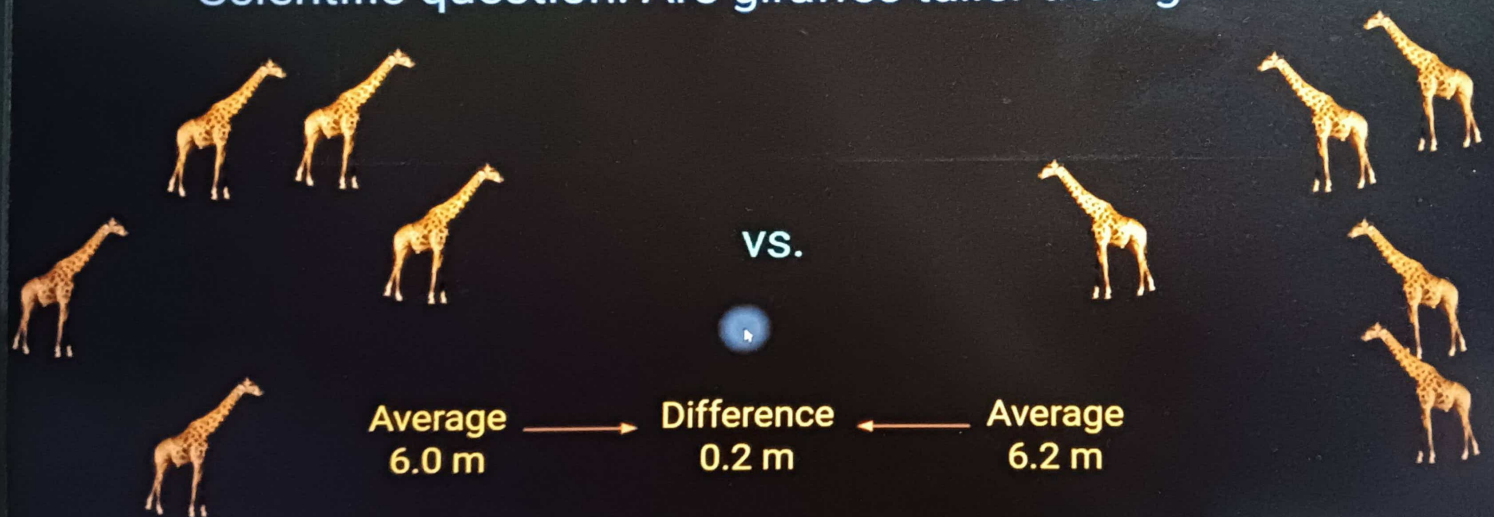


vs.



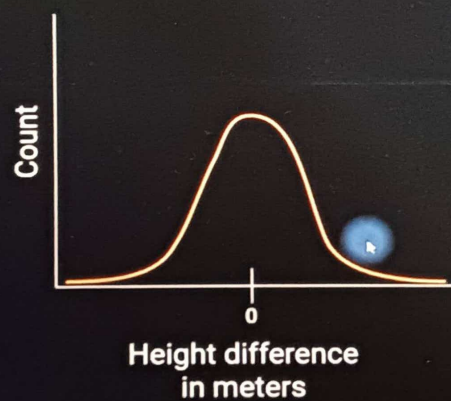
Creating a null hypothesis distribution

Scientific question: Are giraffes taller than giraffes?

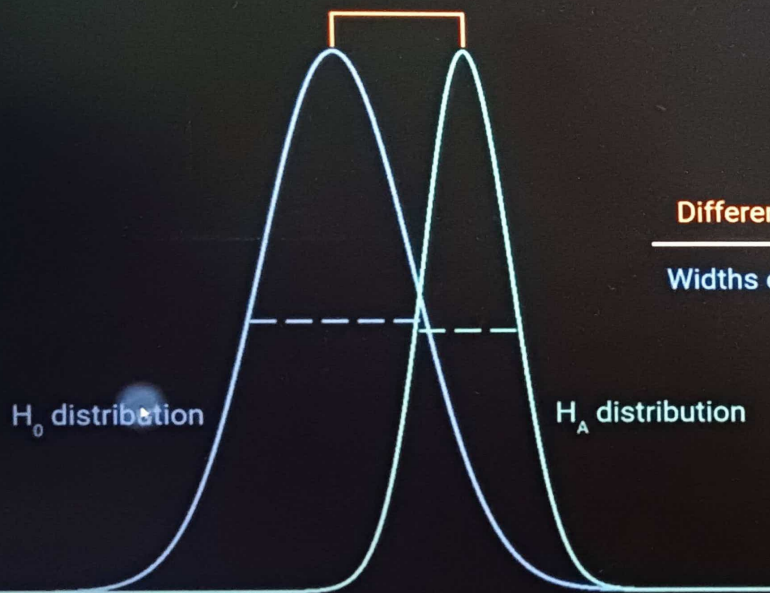


Creating a sample distribution of differences

Scientific question: Are giraffes taller than giraffes?



Estimate distributions under H_0 and H_A

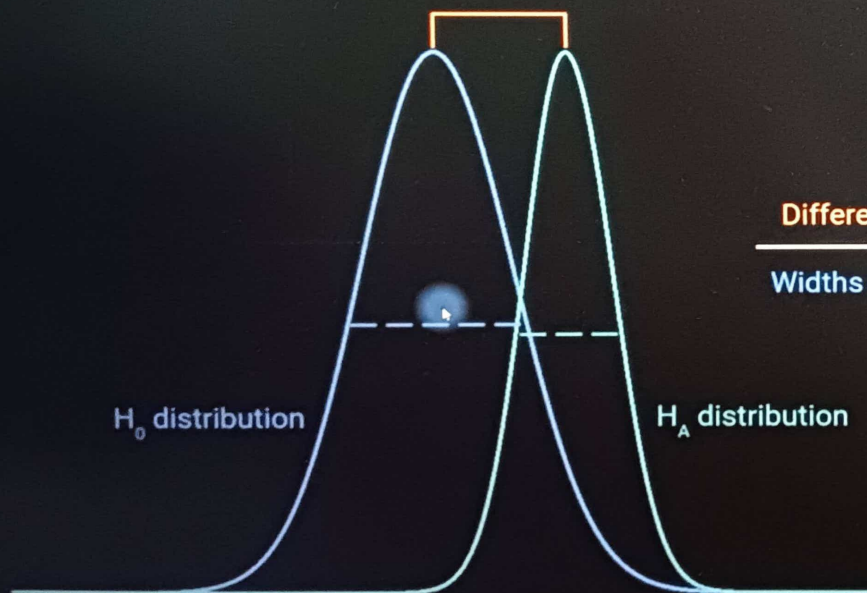


$$\frac{\text{Difference of centers}}{\text{Widths of distributions}}$$

=

$$\frac{\text{Signal}}{\text{Noise}}$$

The basis of ALL inferential statistics



$$\frac{\text{Difference of centers}}{\text{Widths of distributions}}$$

=

$$\frac{\text{Signal}}{\text{Noise}}$$

Distributions under the null and alternative hypotheses

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