Alberto Andrés Valdés González.
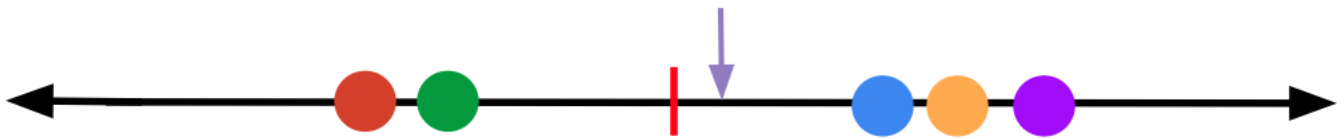**Degree:** Mathematical Engineer.
Work position: Data Scientist.
Mail: anvaldes@uc.cl/alberto.valdes.gonzalez.96@gmail.com
Location: Santiago, Chile.

Bootstrapping

For example consider the exercise of measure the **impact of a apply a medicine** for 5 people.
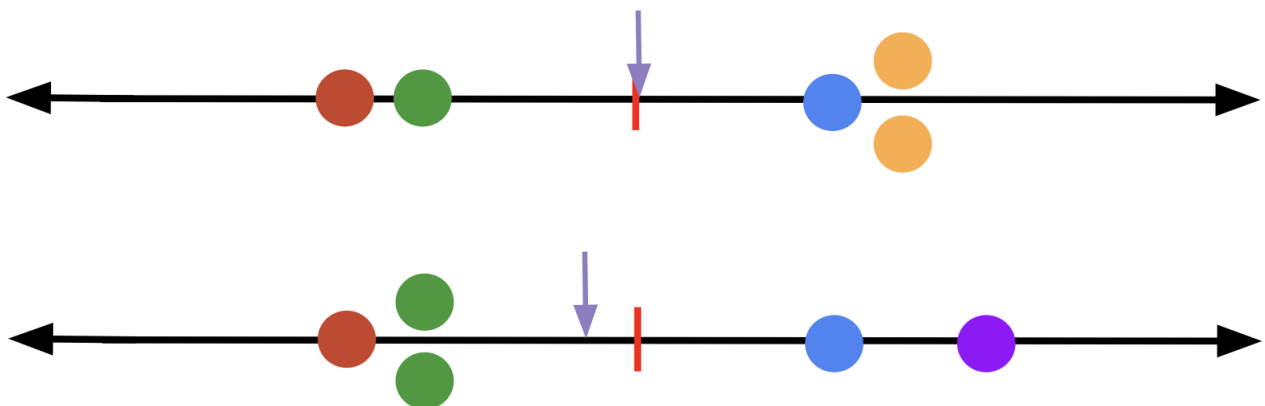

The mean of the impact is 0,5. But we can say: 'Its only one value, we need to repeat more times the experiment'. But repeat the experiment is **expensive**. What can we do to get more values? **Bootstrapping**.

How we have **5 values** we are going to **sampling with replacement** 5 values to create a **bootstrapped dataset**.
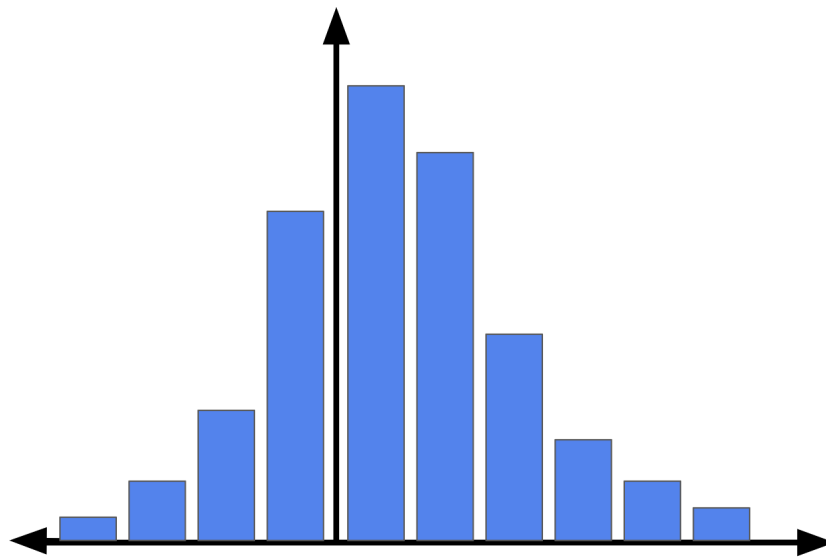
For example:

Steps of bootstrapiing:

1. Make a bootstrapped dataset.

2. Calculate something like mean.

3. Keep track calculation.

4. Repeat steps 1 to 3.

We have a **histogram of mean** like that:

Now we build a **confidence interval**. If the confidence interval cointains 0 we can't reject the null hypothesis that the effect is zero.