

# Missing Data - Mindmap # 5

Missing values can sometimes represent fixed values, most commonly 0

NaN behaves very similarly to NA but it usually occurs when you complete a mathematical operation that has an infinite or undefined response.

## Explicit Missing Values

Last observation can be carried forward using fill()

pivoting:  
pivot\_longer or  
pivot\_wider can  
make implicit missing values  
explicit missing values and  
vice versa.

## Missing Values

## Implicit Missing Values

Data is implicitly missing when it is fully excluded from the dataset. i.e. there is no NA value, the entire row/column is missing.

A common solution to implicit missing values is to join data that fits in the aforementioned missing values.

## Factors and Empty Groups

When working w/ categorical variables, there are usually factor groups and a group w/ NO observations is called an empty group.

use .drop() = FALSE  
keeps all the groups, even those w/ no observations when using count().