

| True Negative | These are the points which are actually false and we have predicted them false. For example, consider an example where we have to predict whether the loan will be approved or not. Y represents that loan will be approved, whereas N represents that loan will not be approved. So, here the True negative will be the number of classes which are actually N and we have predicted them N as well. | | | | | | | | | | | | | | | |
|---------------|--|---------------------|----------------------|---------|--|--|--|---------------------|----------------------|------------|-----------------------|----|---------------|-------------------|--------------|----|
| True Positive | These are the points which are actually true and we have predicted them true. For example, consider an example where we have to predict whether the loan will be approved or not. Y represents that loan will be approved, whereas N represents that loan will not be approved. So, here the True positive will be the number of classes which are actually Y and we have predicted them Y as well. | | | | | | | | | | | | | | | |
| Type I error | <p>The decision to reject the null hypothesis could be incorrect, it is known as Type I error.</p> <table><tr><td colspan="2"></td><th colspan="2">reality</th></tr><tr><td colspan="2"></td><th>$H_0 = \text{true}$</th><th>$H_0 = \text{false}$</th></tr><tr><th rowspan="2">conclusion</th><th>H_0 is not rejected</th><td>OK</td><td>type II error</td></tr><tr><th>H_0 is rejected</th><td>type I error</td><td>OK</td></tr></table> | | | reality | | | | $H_0 = \text{true}$ | $H_0 = \text{false}$ | conclusion | H_0 is not rejected | OK | type II error | H_0 is rejected | type I error | OK |
| | | reality | | | | | | | | | | | | | | |
| | | $H_0 = \text{true}$ | $H_0 = \text{false}$ | | | | | | | | | | | | | |
| conclusion | H_0 is not rejected | OK | type II error | | | | | | | | | | | | | |
| | H_0 is rejected | type I error | OK | | | | | | | | | | | | | |
| Type II error | <p>The decision to retain the null hypothesis could be incorrect, it is know as Type II error.</p> <table><tr><td colspan="2"></td><th colspan="2">reality</th></tr><tr><td colspan="2"></td><th>$H_0 = \text{true}$</th><th>$H_0 = \text{false}$</th></tr><tr><th rowspan="2">conclusion</th><th>H_0 is not rejected</th><td>OK</td><td>type II error</td></tr><tr><th>H_0 is rejected</th><td>type I error</td><td>OK</td></tr></table> | | | reality | | | | $H_0 = \text{true}$ | $H_0 = \text{false}$ | conclusion | H_0 is not rejected | OK | type II error | H_0 is rejected | type I error | OK |
| | | reality | | | | | | | | | | | | | | |
| | | $H_0 = \text{true}$ | $H_0 = \text{false}$ | | | | | | | | | | | | | |
| conclusion | H_0 is not rejected | OK | type II error | | | | | | | | | | | | | |
| | H_0 is rejected | type I error | OK | | | | | | | | | | | | | |
| T-Test | T-test is used to compare two population by finding the difference of their population means.... | | | | | | | | | | | | | | | |