DATA 550 Final Project

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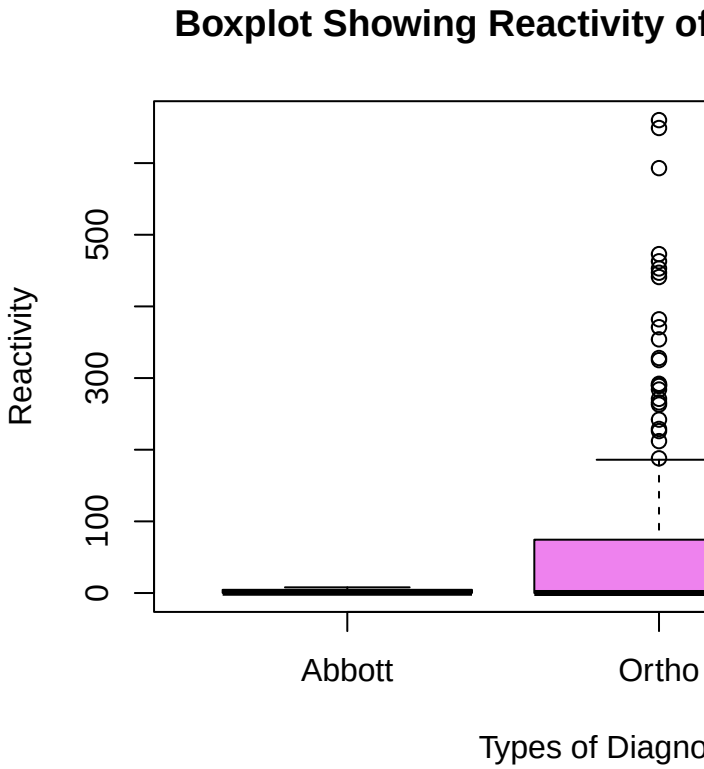
2025-10-09

The dataset I have chosen is the 'Examination of SARS-CoV-2 serological test results from multiple commercial and laboratory platforms with an in-house serum panel'. Since SARS-CoV-2 is a nationally notifiable disease, and we saw the effects of the pandemic in the United States and the rest of the world, diagnostic testing is very important. Conducting a correlation analysis to compare the diagnostic accuracy (explore sensitvity and specificity) might shed some light on which of the 3 tests is truly superior. Below is a summary table I created to illustrate the distribution of the reactivity of these tests in comparison to the gold standard PCR.

```
##
## Neg Pos
## 117  87
```



Creating a figure that displays how the tests' reactivities compare

Table 1: Table 1: The distribution of the reactivity of the Abbott and Ortho Tests in comparison to the gold standard ELISA

Characteristic	**Neg** N = 117[1]	**Pos** N = 87[1]
Sample number	110 (81, 160)	64 (22, 138)
Reactivity of the Abbott Tests		
Non-reactive	116 (99%)	4 (4.6%)
Reactive	1 (0.9%)	83 (95%)
Reactivity of the Ortho Tests		
Non-reactive	117 (100%)	3 (3.4%)
Reactive	0 (0%)	84 (97%)
Reactivity of the CDC ELISA Test		
Non-reactive	115 (98%)	3 (3.4%)
Reactive	2 (1.7%)	84 (97%)

[1]Median (Q1, Q3); n (%)