

Abstract

We will introduce three methods of extension of the classical Tukey's Boxplot for multivariate data. These are the Rangefinder, the Relplot and the Bagplot. To implement the methods, we will need the notions like Mahalanobis distance, elliptically symmetric distributions and halfspace depth. A big part of the thesis is focused on the construction of the Relplot and the Bagplot. We will also discuss, how do these methods detect outliers and what are their advantages and disadvantages. This work contains many examples and illustrating images.