Graphs, and data visualization in general, play a important role in modern statistics. In this thesis, we address the possibility of using these for hypothesis testing. First, we introduce the concept of visual testing and define analogies for terms such as statistic or p-value and additionally we define the terms specific to visual testing. We demonstrate the method of visual testing on an example, where we parallely perform a conventional test for the same data set and the same null and alternative hypothesis. Further, we inspect the possibility of use of Amazon Mechanical Turk for visual testing. We describe the design of visual test and present results of simulation experiments conducted in order to assess the power of the visual test and to compare it to conventional test.