# **Testing Technologies:**

We have incorporated two main technologies to aid us in testing each segment of our Voxel project. These technologies are Jasmine and Karma. Jasmine is an open source testing framework that is installed through the npm using Karma. It is used for unit testing of Javascript functions to ensure that the functions provide the expected output and to ensure that the functions behave as expected. With Jasmine distinct functions will tests various aspects and with the aid of the “expect” statement expected result is compared to the actual results and any mismatch will return a fail. Using Jasmine does require the tester to learn a new form of syntax that is unique to Jasmine.

With regards to Karma, it is a testing environment where testers need not worry too much about the smaller details but rather are able to tests and receive rapid results. Karma also keeps a vigilant eye on the different files and when there is a change it sends out a signal to rerun the test code. This ensures that all copies are up to date. Karma also enables the tester to customize the testing experience by specifying what aspects to include and to use, these specifications are saved in a “my.conf.js” file. To run and build the tests we used Travis-CI, Travis CI is a hosted, distributed continuous integration service used to build and test projects hosted at GitHub. Travis CI automatically detects when a commit has been made and pushed to a GitHub repository that is using Travis CI, and each time this happens, it will try to build the project and run tests.