Reddit Analytics Engine Software Testing

Mattias Huber, Preston Peterson, Zoltan Batoczki,

Phillip Porter, Heather Bradfield, Jesus Bamford

Development Testing

For each analytics module, we tested that a response was generated given that the passed user object was valid. Furthermore, the handler module that called the analytics modules was tested to ensure the functionality of the analytic modules was accessible from the handler and not just the unit tests. After ensuring the handler was functional after each latest evolution, we tested the system by starting the bot, and sending instructions from reddit to see if the request made it to the analytic modules and back, with no errors.

Release Testing:

We have performed limited release testing by running our Reddit bot and querying it from Reddit. These tests utilized all of our defined analytic functions and used several different parameters. To make our release testing complete, we must test installing the bot software on a new system without using any developer skills or knowledge. We have implemented a lightweight installer which installs all the required packages and dependencies in order to run the bot. However our bot is not intended for wide distribution to users, the user interacts with the bot over reddit.

Validation Testing:

In order to perform validation testing in a true sense, we would have to go through and manually count the amount of words a person said in their comment history (for example with the word count). Since a person’s comment history can be many thousands of words long this would be very cost prohibitive. However we performed heuristic analysis by counting subsets of our datasets and comparing it against the results of the bot. At each stage of adding new modules we performed this testing again with the new requirements.

Defect Testing

To have successfully done defect testing, the format of a user comment should be tested. If the user submitted a comment with the correct format, then the bot will reply with the command they mentioned in their comment. If the format was incorrect, then the program will throw an exception, and skips the comment.

User Testing:

We performed user testing by letting colleagues interact with the bot on reddit, as well as mimicking the user interacting with the bot. The data we got from our user tests was highly useful as it allowed us to better streamline the user experience. For example, we found that though users were easily able to understand the syntax of the analytics engine, the meaning of some of the resulting data was at times unclear. This led us to add some extra info text to better explain how certain analytics work. We also spent a fair amount of our own time on quality assurance, where we would play the role of the user in an attempt to get a better perspective of how the software performs.