Wifiology Final Submission

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Group: 404 Group Not Found (104-2)

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1 Process Tools

1.1 Progress Tracking – Trello

For this project we used Trello for making and using Kanban cards to track progress. Our Trello board is located at https://trello.com/b/VvROa8e0/wifiology. It is currently set to private, but we plan to set this to public in the very near future. If you are unable to access this board, please reach out to Robert Cope (roco9727@colorado.edu) and Jasper Niemeyer (jani5714@colorado.edu) to request access. An image of our Trello board is shown in figure 1.1.

1.2 Version Control – Git and Github

For this project all of our code is stored on public repositories in Github under the 404 Group Not Found Github group, located at https://github.com/404-group-does-not-exist. The project is constituted of several repositories. Our milestones may be found at https://github.com/404-group-does-not-exist/milestones, and our minutes may be found at https://github.com/404-group-does-not-exist/minutes. The source code for the NodeJS central server may be found at https://github.com/404-group-does-not-exist/Wifiology. The code for the listener node may be found at https://github.com/404-group-does-not-exist/client_proof_of_concept. The source code for our Android app may be found at https://github.com/404-group-does-not-exist/wifiology_android_app, and the source code for our Selenium tests may be found at https://github.com/404-group-does-not-exist/Selenium. Please node we have foregone using a monorepo for the codebase listed above to ease development of separate concerns; for the sake of this final submission, we have chosen to keep the repositories separate to allow graders a more honest look into commit history (rather than bringing everything into a single repository at the last moment, and potentially losing all commit history).

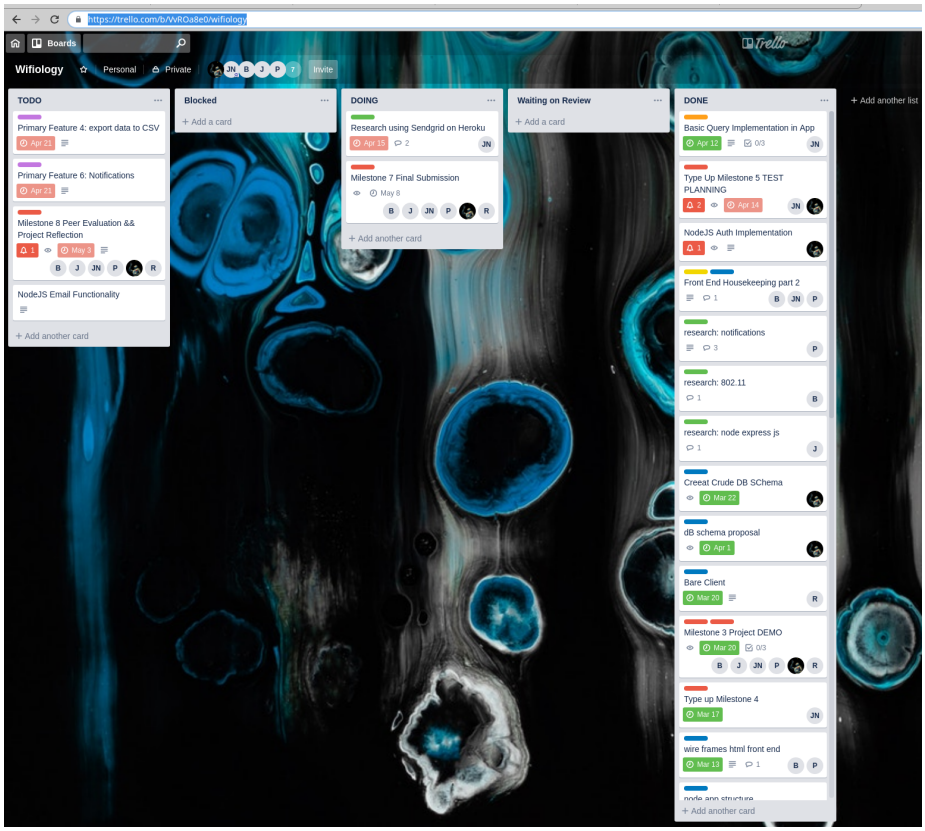

Figure 1: Wifiology Trello Board

1.2.1 Structure

It is important to understand the basic application architecture in order to understand the repository structure. The basic organization of the Wifiology ecosystem and architecture is given in figure 1.2.1. There any many listener nodes, each potentially deployed and managed by separate users; the code for the listener nodes is contained completely in the repository at https://github.com/404-group-does-not-exist/client_proof_of_concept. The central server is deployed once, and is written in NodeJS; it can be found in its entirely in the repository at https://github.com/404-group-does-not-exist/Wifiology. This repository also includes the web front-end for Wifiology.

The Android application also shown in the architecture diagram (figure 1.2.1) is stored entirely in the repository located at https://github.com/404-group-does-not-exist/wifiology_android_app.

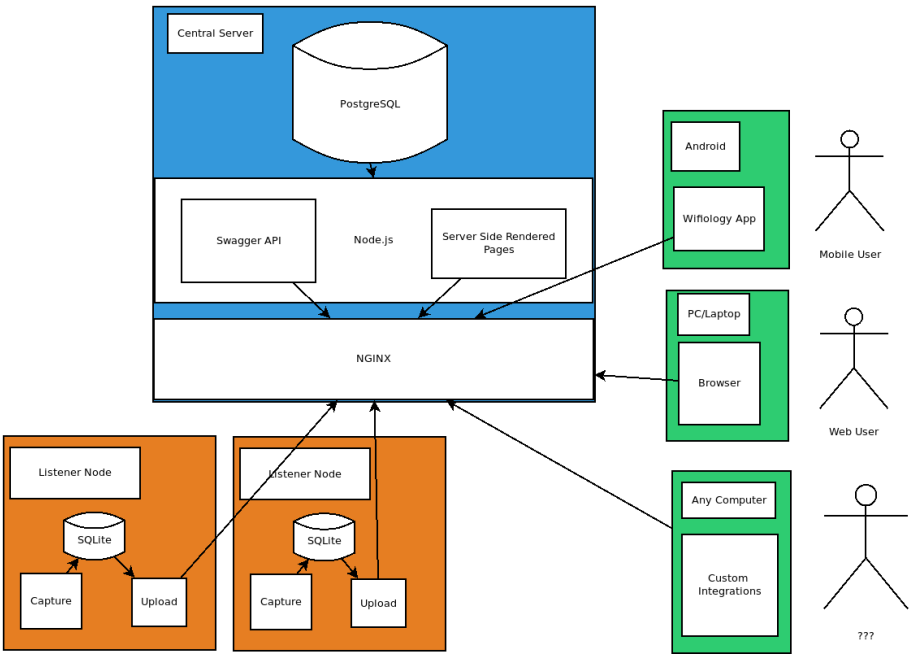

Figure 2: Wifiology Architecture

1.2.2 Tests

For the "`client_proof_of_concept`" repository, which is our listener node, unit tests may be run by setting up a Python virtual environment, installing the requirements using `pip install -r requirements` and then using `nose test_wifiology_node_proof_of_concept` to run our unit tests.

For the "`Wifiology`" repository, which is our central server, the tests may be run using `npm test`. Please note that the application and tests were designed to be run with the latest LTS version of NodeJS (which is 10.13.0); please ensure you have the version of NodeJS running (likely using the `nvm` Node versioning tool to select it) prior to executing the tests.

The selenium tests may be run my cloning the selenium repository, ensuring the current instance of Python has selenium webdriver installed, and then executing each script by giving it as the first argument to a new Python interpreter.

1.3 Continuous Integration

We utilized Travis CI for our continuous integration. Our Travis CI jobs can be seen at https://travis-ci.org/404-group-does-not-exist.

1.4 Demo Video

A demo video of our web application can be found at https://f001.backblazeb2.com/file/rpc-public-bucket/vokoscreen-2019-05-05_17-37-50.mkv.

1.5 Individual Contributions

1.5.1 Robert Cope

See the included code contribution figures. Robert contributed to the core Wifiology NodeJS application, the listener node, and to the operations and deployment for the project deployment.

1.5.2 Jason Nguyen

See the included code contribution figures. Jason contributed to the listener node codebase.

1.5.3 Baiyu Chen

See the included code contribution figures. Baiyu contributed to the core Wifiology NodeJS application and the Selenium tests.

1.5.4 Jasper Niemeyer

See the included code contribution figures. Jasper was also the project manager for our project and did much of our clerical work; Jasper also contributed to the core Wifiology NodeJS application and much of our operations work.

1.5.5 Peng Jiang

See the included code contribution figures. Pend contributed to the core Wifiology NodeJS application.

1.5.6 Ryan Campbell

See the included code contribution figures. Ryan contributed to the core Wifiology NodeJS application and the Android application.

1.6 Deployment

A running instance of the Wifiology app can be found at https://wifiology.copesystems.com/. As of the writing of this document, there is at least one listener node actively reporting back to the application instance, and registration into the application is still turned on.

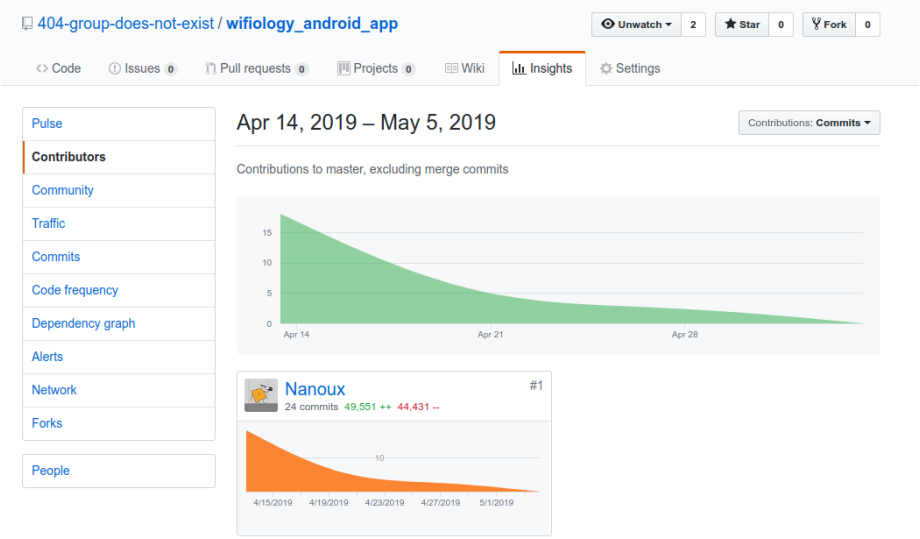

Figure 3: Android App Contributions

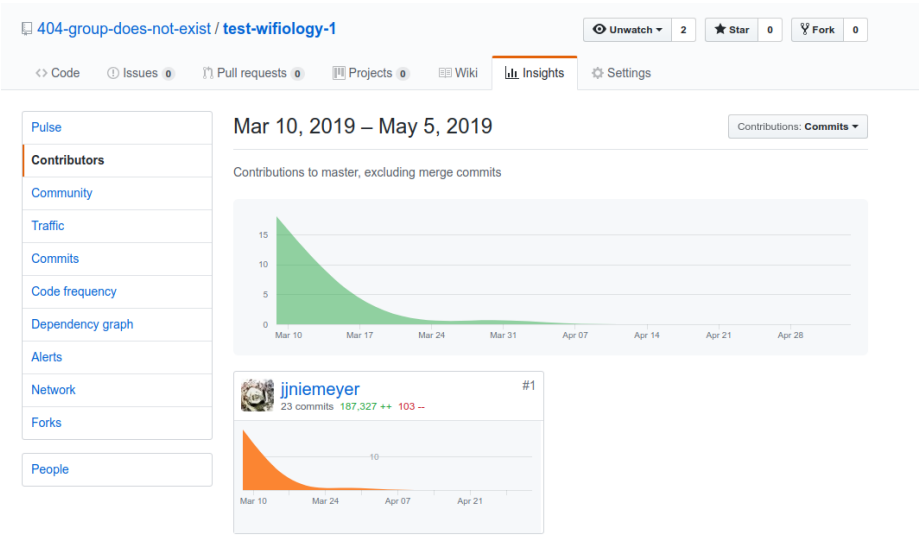

Figure 4: Wifiology Test Repo. Contributions

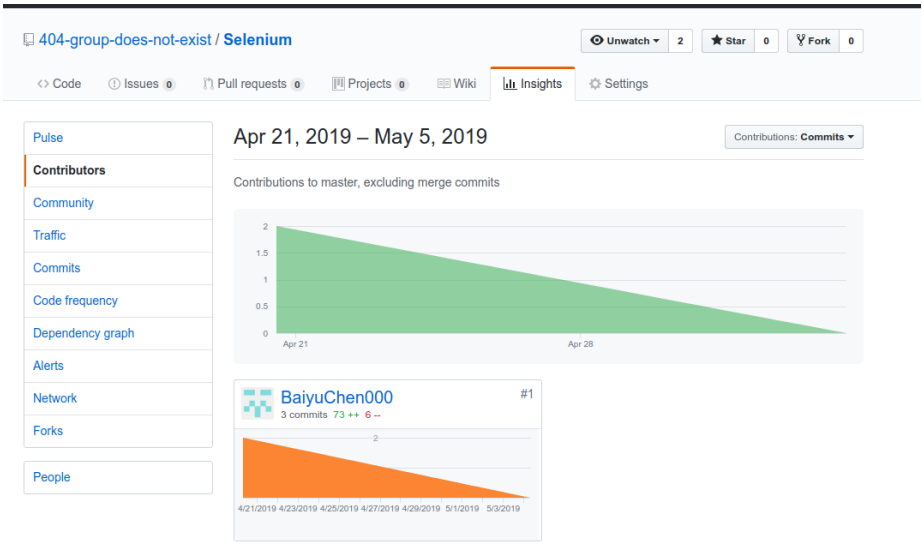

Figure 5: Selenium Tests Contributions

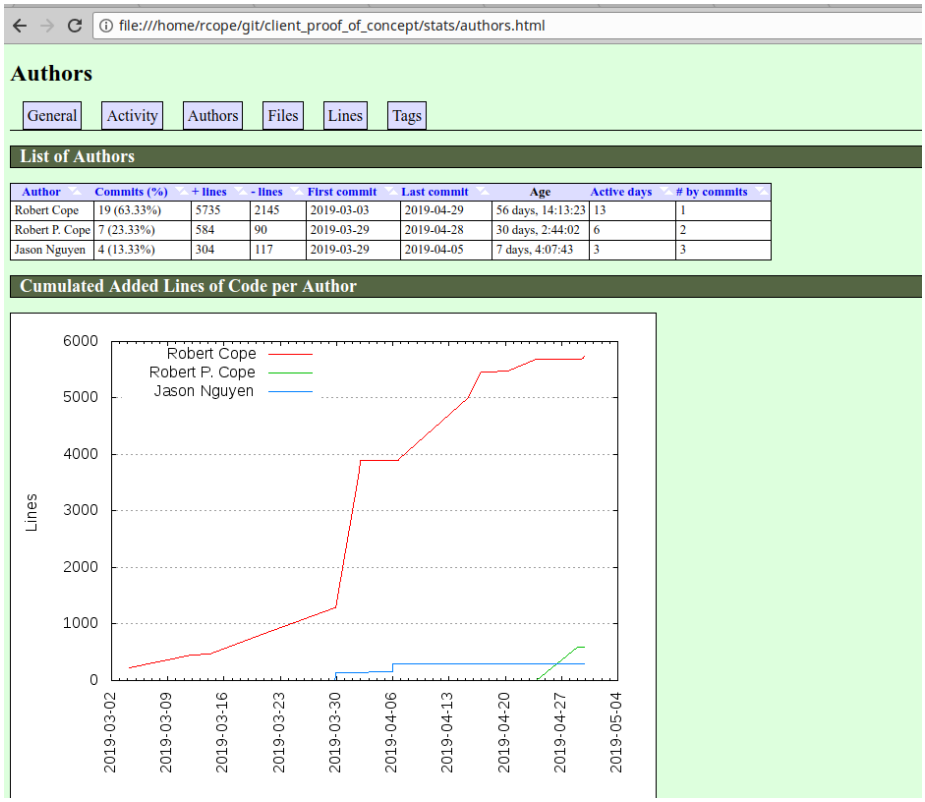

Figure 6: Listener Node Contributions

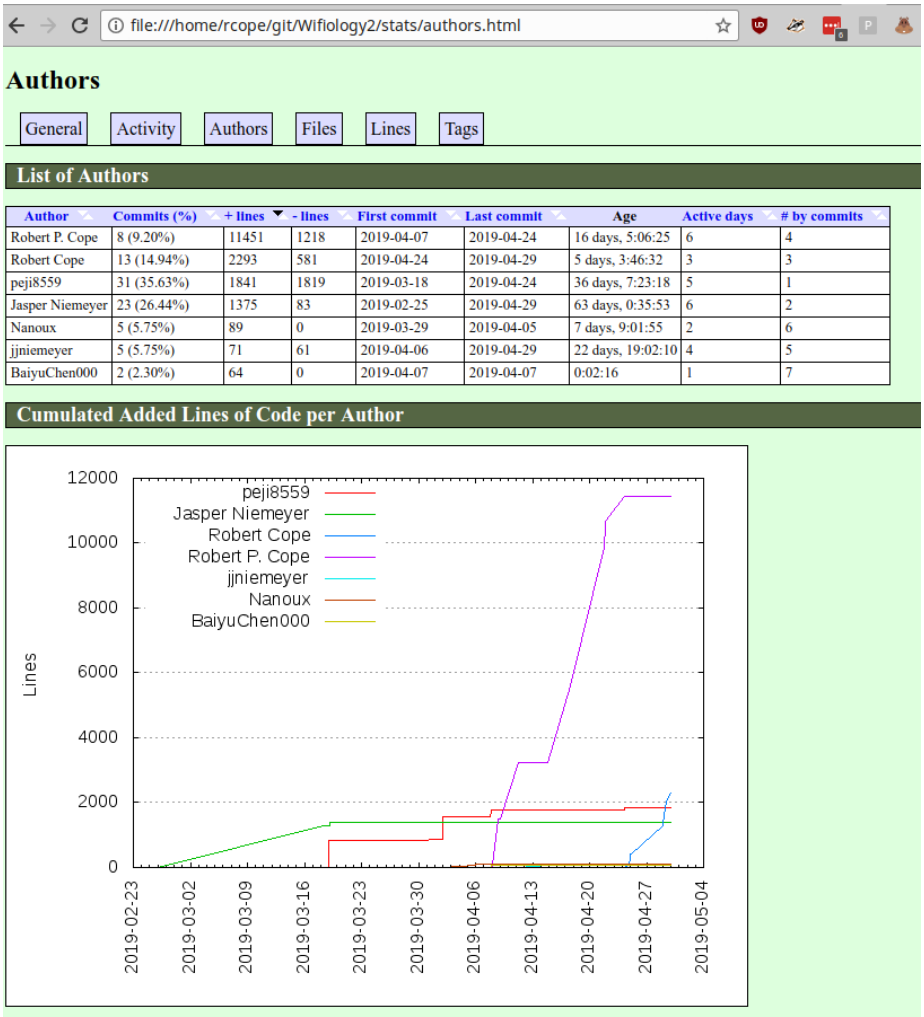

Figure 7: Core Server Contributions

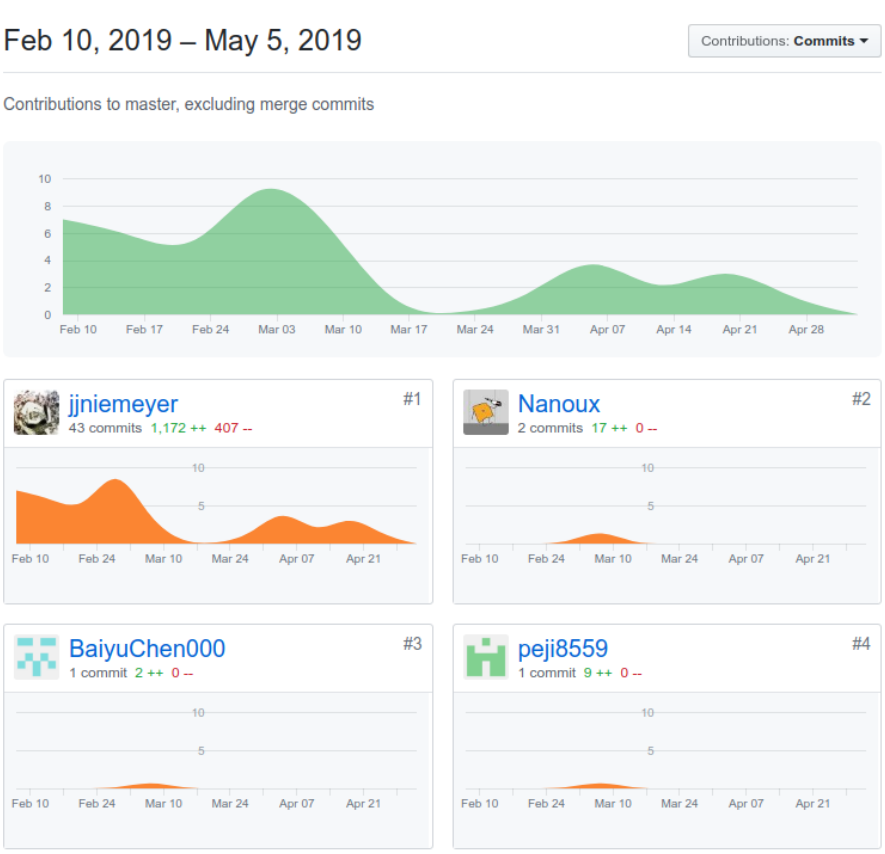

Figure 8: Minutes Contributions

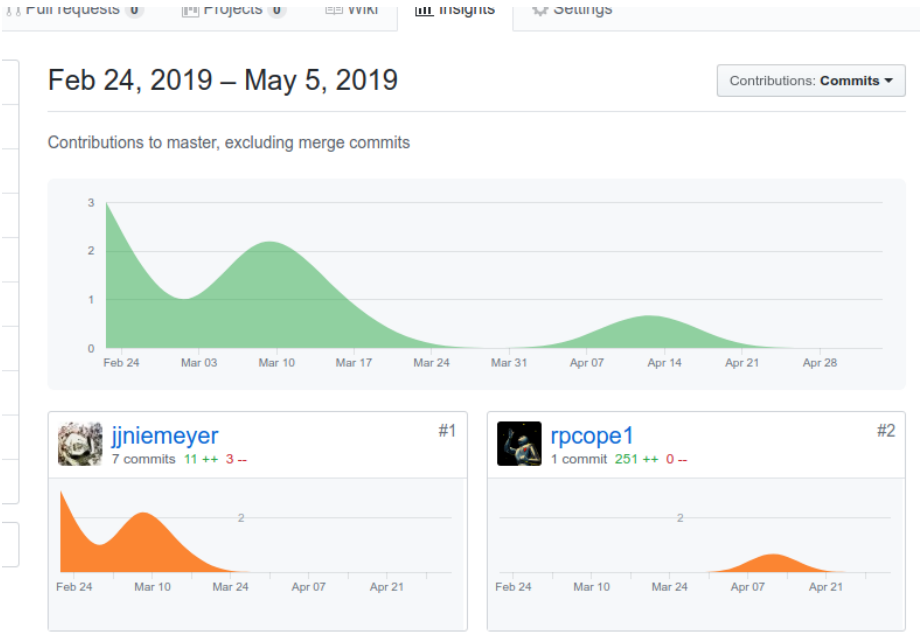

Figure 9: Milestones Contributions