

### **Team Null Set Abstract**

The purpose of our semester-long project was to develop and strengthen our software engineering knowledge and skills through a practical medium. In our case was working within the community of free and open-source software. The open-source software project we were working with was Zulip, a competitor to Slack. The medium we were working with Zulip with was through Github to maintain their codebase, as Zulip contains many versions they need to maintain for several clients. In particular, we have been working on fixing several bugs Zulip has for their latest and greatest version. We have had throughout most of the semester of about 15 weeks to work on as much as we can. Zulip allows us as junior developers to work on a few different aspects of their codebase. Zulip allows us to work on their front end UI, their back-end processes, or work out their bugs as they roll out new updates. Not only can we work on their code, but we can also work on their documentation such as their command list for what users can and cannot illustrate on their text editor. If we ever discovered a bug while working or testing their software, we can always write and submit a bug report. The bug report would include information about how to replicate the bug for others to test, as well as which version of Zulip we were using. Many of these types of contributions were what we were able to perform with Zulip as junior developers. The lead developers would issue guidance to us junior developers as we work on the codebase within Zulip. Ultimately, we learned and strengthened many of our software engineering skills while working with Zulip this semester.