Quality and Productivity Outcomes Relating to Continuous Integration in GitHub

Summary

This paper looked at CI and how it affects the productivity of developers and the quality of the software. The authors collected projects that uses pull requests as main method of updating code and adopts a CI system after the start of the development so that the project captures the development before and after adopting a CI system. The author used Travis CI due to its integration with GitHub. This resulted in 246 projects selected. The authors did a analysis on the projects based on pull request frequency and bug count to answer questions on productivity and software quality. Their analysis show that CI makes merging pull request more efficient and CI captures more bugs and does not affect code quality.

Things I would like to see discussed

- The author mentioned such analysis can't eliminate whether the results are due to CI or other things that CI introduces. What are the ways to evaluate them?

- The study only uses Travis CI. Would different CI have different effects?

- To some extend, the projects after the filter would only be larger systems. Do larger systems behave similarly to small systems.