

Graduate School of Science and Technology Master's Thesis Abstract

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Thesis title	An Empirical Study on the First Responses to First-Time Contributors in OSS Projects		
Abstract			
Open Source Software (OSS) projects rely on a continuous stream of new contributors for sustainable livelihood. Recent studies reported that new contributors experience many barriers in their first contribution, with the social barrier being critical. Although a number of studies investigated the social barriers to new contributors, I hypothesize that negative first responses may cause an unpleasant feeling, and subsequently lead to the discontinuity of any future contribution. I execute protocols of a registered report to mine 72,635 active projects in GitHub, and analyze 2,765,917 first contributions as Pull Requests (PRs) with 642,841 first responses. The findings characterize first response instead as positive, but less responsive, non-toxic and exhibit sentiments of fear, joy and love. Positively and responsiveness has no relationship with a future interaction. Qualitatively, I find that negative (non-toxic) first responses are mainly comments, suggestions and questions that are mostly constructive (50.71%) or criticizing (37.68%) in nature. Running different machine learning models, first response interactions are positively correlated with a future contribution, but other dimensions (i.e., project, contributor, contribution) have a larger effect. Although negative comments may cause unpleasant negative feelings, instead should not be seen as a barrier for both OSS projects and first time contributors.			