Recruiting and Retaining Newcomers Using Online Bots

INTRODUCTION

A main challenge faced by large scale collaborative projects is recruiting newcomers and retaining them [6]. The retention of newcomers is important because they impact the project's lifespan [2]. Newcomers can also expand the coverage of a project, importing novel perspectives. However, maintaining newcomers is difficult. Wikipedia's volunteer workforce e.g., has been steadily decreasing since 2007 [5].

Several platforms and workflows have attempted to tackle this problem. However, designing them is also complex and do not always translate into efficient solutions. For instance, several platforms use marketing schemes to import a flux of user [4]. But, this does not necessarily translate into having long-term participants, especially because other more attractive platforms can again sway them away. Other approaches have created sandboxes, where newcomers can make safe contributions, and slowly become a part of the community [3]. However, this usually requires experienced volunteers to invest time engaging newcomers, limiting their own contributions. Other approaches have studied engaging newcomers with simple lightweight socialization processes [1]. These approaches showcase how newcomers can be retained, while not imposing a large burden on others. However, these socialization processes generally operate within the group of users already present on the site [2]. This can limit the type of people who decide to initially take part, possibly influencing the platform's newcomber retention.

To help retain volunteers for large scale collaborative projects, such as Wikipedia, we present RoboWiki, a platform that leverages online bots, to actively recruit new volunteers and then retains them via lightweight socialization processes. We speculate that by involving external people who publicly show a great interest or passion related to the project, we will be able to recruit them longer term than average new editors. We focus in particular on retaining newcombers for Wikipedia. We consider we can use Twitter to identify people with potential interest in editing a given Wikipedia article. Our system works as follows: An editor first presents the Wikipedia article for which she wants new volunteers, as well as the list of keywords that define the article. Secondly, the platform identifies people who appear to have an interest in the topic of the article based on simple keyword matching with their latests Tweets. The platoform then sends out bots to invite these people to edit and improve the Wikipedia article. If the person accepts, the same bot within Wikipedia provides a lightweight socialization process to help retain the new volunteers. We base the socialization process on MoodBar [1]: newcomers are requested for lightweight feedback about their editing experience. Experienced volunteers can see the feedback and provide guidance if needed.

Figure 1. Insert a caption below each figure. Do not alter the Caption style.

To understand the benefits and limitations of platforms which use automated social agents to recruit and retain new volunteers, we designed and conducted experiments on Twitter. We deployed our platform publicly on Twitter, where our bots invited people to help edit Wikipedia articles. The bots recruited two different groups of individuals: people whose latest tweets showcased a potential interest for the Wikipedia article; and a set of randomly selected Twitter users (control group). XX volunteers responded to RoboWiki calls to edit; and YYY volunteers actually started editing the articles. These volunteers made XXX contributions (XXXX tweets, XX favorites and retweets, edited XXX articles with XXX words). We found that the people with a potential interest in the article had more discussions on Twitter with RoboWiki, edited more articles; and remained longer on Wikipedia than the people without the previous interest (average XX months in comparison to XX days by control group). The people who were recruited by bots edited also a larger number of articles than the people who arrived to Wikipedia on their own. However, they also suffered initially more frustration editing (as expressed by their moodBar responses).

Together our results showcase how volunteers can be retained longer term by recruiting people who publically express an interest in the topic, and using socialization methods to guide their contributions and retain them longer term.

References and Citations

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