

A Crowdsourcing Approach to Finding Evidences

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The explosive growth of information techniques and the internet have made the world a more connected place than ever before. One consequence of that humans are willing and capable to share their knowledge, experiences, skills, and perception. Meanwhile, Crowdsourcing techniques have also been developed. It promises to leverage the ‘wisdom of crowd’ to solve real-world problems and human intelligence tasks that are difficult to complete by an individual, a small team or a computer, such as an image tagging for subjective topics, generating conference programs, understanding topics in micro-blogs, verify the natural disasters, to names but a few. Therefore, crowdsourcing has become increasingly popular and considerable success in academic researches. This motivation has become to introduce and investigate a crowdsourcing-based framework, in order to address the limitations of existing works of the spread of misinformation and disinformation—known as fake news. The extensive spread of fake news has become a serious negative impact on the web and social network in the world today. In this context, the investigation process and searching accurate information are more challengeable. Over the last several years, although there are many web-based systems have been developed to detect fake news, some serious problems can be identified on those services. The approaches of those systems are limited by getting only the rating on the statements from the users or investigate the fact by a few team members. This thesis introduces a novel framework to detect accurate information by ensuring the quality of the results. The proposed framework is consisting of two phases and uses multiple crowds with a lower monetary cost and does not require the contribution of expertise. In this crowdsourcing-based approach, crowd workers are asked to prove the fact by finding possible evidences. The results of the thesis show that more than half of the answers from the crowd, were possible evidences, and approximately one-third of the possible evidences were strong. The study also demonstrate, this crowdsourcing-based approach is able to collect various possible evidences on difficult problems and provide diverse methods for proofs, among which some were surprising as we did not factor those as proofs. In particular, the study implies that the crowdsourcing could help effectively to discover the possible evidences on inaccurate information or the given statements. This shows the power of crowdsourcing and the experiment also shows that there is much room for further improvement of the framework in several ways. Thus, the further improvement of the framework will be done in my future works.

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