

Graduate School of Science and Technology Master's Thesis Abstract

Laboratory name (Supervisor)	Software Engineering (Ken-ichi Matsumoto (Professor))		
Student ID	2011421	Submission date	2022 / 7 / 25
Name	SAKULNIWAT TATTIYA		
Thesis title	Answering with Different Code Competencies: A Case Study of Python Code Snippets in Stack Overflow		
Abstract			
Stack Overflow(SO) is a popular question-and-answer site, used by developers for searching and answering their programming questions. A key issue when using this site is understanding what is the “best” answer. Especially with popular programming languages like Python, there is so many ways to write code, or “answer” a question. In this thesis, I would like to explore whether or not there are factors that influence how Python programmers answer SO questions. Specifically, I used a tool that measures the competency of code as a metric. I conducted an empirical study on 1,638,060 Python Posts for 623,483 questioners and 382,494 answerers to explore different situations. Using three RQs and a mixed-method approach I conducted an empirical study to explore how competency of the code answer is related to community feedback SO score (R1), the type of question asked (RQ2), and the questioner experience (RQ3). Results shows that answering with easier competency (Level A1 and A2) has not correlation with a higher SO score. Although there is no strong evidence of did not find a correlation between the question type and the code competency needed to answer the question. For RQ2, harder competency answers were directed to answering non-functional questions, while easier competency was directed to environment questions. Moreover, translation questions had a range of easy to hard code answers. Finally, for RQ3, I found that experienced questioners gave lower scores for harder competency answers. Insights from this work will go towards understanding how to help developers with finding the “best” answer based on their situation.			