Graduate School of Science and Technology Master's Thesis Abstract

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Thesis title	Studying the Usefulness of Chatbot for Solving Program Errors from User Interaction and Perception		

Abstract

A key hurdle that students face when first learning how to program is difficulty in understanding compiler error messages. With the rise of bots that can support developers in various software engineering scenarios, we believe that there is an opportunity for conversational bots to assist students in diagnosing and resolving their compiler error messages. In this research, we set out to discover how the students interact with a chatbot that is designed to support them comprehending the error messages and debugging their code.
Interestingly, we find that our participants treated the chatbot as a search tool. Moreover, our results indicate that the user interaction spans across a wide range of queries from conceptual programming knowledge to specific compiler error messages.
In addition to this, we find that how much participants are satisfied with the chatbot in terms of functionality and user experience. Findings of this research brings useful implications for three target groups – chatbot designers, researchers, and students - along with the replication package of this user study experiment.