Context-aware Conversational Assistants (Moderator Script)

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(IDEA) The authors proposed a context-aware conversational assistant named Devy for developers. The most promising feature of this approach is it is context-aware so that it can automatically track the contextual information, such as "Current Project", "Active File" etc. With that information, it reduced the effort when developers are interacting with the assistants. Within my quick google search, Devy seems to be the first to combine conversational assistants and develop support tool. The idea behind Devy is to reduce the context switches between different workflows, such as tests, version control, issue tracker etc.

(Implementation) The system is built on top of Amazon Alexa, and thus requires a remote microphone as voice input. When developers need to perform a certain task, they will "speak to" the Amazon Echo, which is equipped with Alexa and will recognize the sentence. Then by using Amazon NLP it will call certain Devy Skills. Meanwhile, on the developers' computer, there will be a system service that reads the intent, analyse context information, and perform workflow actions.

(Experiments) The authors recruited 21 professional software developers from 6 companies. They have an average of 11 years of professional experience. The experiments consisted of three parts, 1) a brief semi-structured interview to ask about developers tasks and workflows as well as about the possible value of a conversational assistants to support these. 2) an experiment with Devy comprised of two study tasks. and 3) a follow-up semi-structured interview on the experience and use of a CDA. The experiment results looks great, all participants were able to complete all subtasks,and they all give a positive feedback on Devy.

Questions:

1. What's your overall opinion on this paper and its approach? Do you like it? What's the most impressive part?
2. For the idea, do you like the idea "using conversational assistant" to help reduce context-switches?
3. For the implementation, the author uses Alexa. If you were the developers, would you like to use Alexa? I won't since it leads to 2 significant problems and without any advantages.
4. For the experiments, did you see any shortcomings of the experiments? what kind of improvements can you make to the original experiments?
5. Did you see any more challenges to the current implementation?