Voice Enabled Intelligent Programming Assistant

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Abstract

In modern era where software development is vital important and software developers are challenged with conditions such as Repetitive Strain Injury (RSI) which hinders their ability to work effectively. Furthermore, people with difficulties with using their hands also finding it challenging to program in the traditional manner. As a solution, coding with ones voice has been experimented with, but current solutions lack interactivity and harder to use and setup leaving much room for improvement in this domain. In this research work, mainly focused on using input classifier models with accuracies over 90%, intent classifiers with accuracies over 70%, code parsing and various human computer interaction techniques, are developed. Furthermore, a conversationally interactive, programming language agnostic, easy to setup and easy to use Voice Coding Assistant. This will potentially help a global audience of programmers to achieve their goals and improve their productivity to lead a healthier life. We have named the system thus developed, Venic.

Keywords

NLP, Voice Coding, Voice Transcription, RSI, TTS, RASA, HCI.