A New Technique to Generate Use Cases and Class Diagrams from User's Requirements Using Deep Learning

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Al-Zaytoonah University of Jordan, 2020

Abstract

This thesis is presented to suggest a system that can improve the generation of requirements for naturally written software and convert it into a use case and class diagram using deep learning. The increasing demand for programming, artificial intelligence, applications and large complex software has made it difficult to collect the system requirements in terms of understanding and analyzing them properly, many previous studies have attempted to solve those problems through generating the system requirement written in the natural language and using the processing techniques of the natural language but in vain. Neither the results accuracy nor the response speed were improved as required, and as such we have proposed a new methodology that relies on combining two technologies together namely a treatment technique of the natural language and deep learning technology.