BETTER PROGRAM COMPREHENSION VIA NEURAL MACHINE TRANSLATION

presented by

Siyuan Jiang
University of Notre Dame

Abstract:
In Software Engineering research, program comprehension problems are about improving the ways that programmers understand software projects. With the growing open source community that has millions of software projects accessible online, this talk will discuss ways how deep learning and natural language processing (NLP) methodologies can leverage the massive data in the open source community to build tools for summarizing software artifacts. Specifically, this talk will explore how we can create text summaries for software artifacts using Neural Machine Translation (NMT). NMT is a type of neural network that is designed for natural language translation. This talk will give examples of using NMT to translate different types of text, such as diff files, to English descriptions.

Bio:
Siyuan Jiang is a Ph.D. candidate in Computer Science and Engineering at the University of Notre Dame. Her research area is software engineering. Specifically, her recent work focuses on program comprehension for software maintenance tasks. Her research interests include empirical studies, program analysis, applied machine learning and text mining in software engineering.

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