Combining Information Retrieval and Relevance Feedback for Concept Location

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Abstract:

The amount of information a person is presented with every day has come to staggering amounts. Software developers are no exception, as they are faced every day with maintaining and evolving software systems having thousands or millions lines of code. In order to be able to handle such systems, developers need tools to help them locate information fast and accurate. Most such tools depend on the ability of developers to precisely describe the target of their search in the form of queries. This often leads to a paradox: the programmer searches the software because she does not know where a piece of information is located and what form of representation it has in the software; in consequence, she can not accurately describe something she does not know. This talk presents a solution to this paradox, based on combining Information Retrieval and User Relevance Feedback for searching software and illustrates its applications in a series of case studies for locating concepts in source code during bug fixing. It also presents the main challenges of this research and proposes solutions to address them.

Biography:

Sonia Haiduc is a Ph.D. candidate in the Dept. of Computer Science at Wayne State University. She received her M.Sc. degree in Computer Science from Wayne State in 2009 and her B.Sc. in Computer Science from “Babes-Bolyai” University in Cluj-Napoca, Romania in 2006. She has served as a Graduate Teaching Assistant, Instructor, and Graduate Research Assistant in the Department of Computer Science at Wayne State University since 2006. Her research interests are in the area of software engineering, in particular software maintenance and evolution. She has published several research papers in refereed conferences, such as: IEEE ICPC, IEEE CSMR, IEEE ICSM, and IEEE WCRE.