

Automatically Generating Summary Comments for Java Methods

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Abstract:

Studies have shown that good comments can help programmers quickly understand what a method does, aiding program comprehension and software maintenance. Unfortunately, few software projects adequately comment the code. One way to overcome the lack of human-written summary comments, and guard against obsolete comments, is to automatically generate them. In this talk, I will present a novel technique to automatically generate descriptive summary comments for Java methods. Given the signature and body of a method, our automatic comment generator identifies the content for the summary and generates natural language text that summarizes the method's overall actions. According to programmers who judged our generated comments, the summaries are accurate, do not miss important content, and are reasonably concise.

Biography:

Dr. Lori Pollock is a Professor in the Department of Computer and Information Sciences at the University of Delaware. She earned her Ph.D. and M.S. in Computer Science at the University of Pittsburgh, and her B.S. in Computer Science and Economics at Allegheny College. Her research currently focuses on program analysis for building better software maintenance tools, optimizing compilers for modern computer architectures, and software testing. She is an ACM Distinguished Scientist. She currently serves as an Associate Editor for the ACM Transactions on Software Engineering and Methodology (TOSEM). She served on the executive committee and as an officer of ACM SIGPLAN for several terms.

Dr. Pollock has actively worked for improving the participation of women and other underrepresented groups in computer science for many years. She was awarded the University of Delaware's E. A. Trabant Award for Women's Equity in 2004. She serves on the Executive Board of the Computing Research Association's Committee on the Status of Women in Computing (CRA-W), which was honored with the National Science Board's 2005 Public Service Award to an organization for increasing the public understanding of science or engineering.