Assessing The Quality Factors Found in In-Line Documentation Written in Natural Language: The JavadocMiner

Submitted by [ninus](#) [1] on Fri, 2011-04-15 19:14

- [Computational Lingusitics](#) [2]
- [GATE Components](#) [3]
- [Java](#) [4]
- [Javadoc](#) [5]
- [Javadoc Miner](#) [6]
- [nlp](#) [7]
- [Semantic Software Engineering](#) [8]
- [NLP](#) [9]
- [Software Engineering](#) [10]

Title	Assessing The Quality Factors Found in In-Line Documentation Written in Natural Language: The JavadocMiner
Publication Type	Thesis
Year of Publication	2011
Authors	[Khamis, N.](#) [11]
Academic Department	Department of Computer Science and Software Engineering
Degree	Master of Applied Science (Software Engineering)
Date Published	04/2011
University	Concordia University
City	Montréal, Quebec
Thesis Type	Masters
Keywords	[Computational Lingusitics](#) [12], [Java](#) [13], [Javadoc](#) [14], [Javadoc Miner](#) [15], [NLP](#) [16]

Abstract — An important software engineering artifact used by developers and maintainers to assist in software comprehension and maintenance is source code documentation. It provides the insight needed by software engineers when performing a task, and therefore ensuring the quality of documentation is extremely important. In-line documentation is at the forefront of explaining a programmer's original intentions for a given implementation. Since this documentation is written in informal natural language, ensuring its quality needs to be performed manually. In this works, we present an effective and automated approach for assessing the quality of in-line documentation using a set of heuristics, targeting both the quality of language and consistency between source code and its comments. Our evaluation is made up of three parts: We first apply the JavadocMiner tool to the different modules of two open source applications (ArgoUML and Eclipse) in order to automatically assess their intrinsic comment quality. In the second part of our evaluation, we correlate the results returned by the analysis with bug defects reported for the individual modules in order to examine connections between natural language documentation and source code quality. And finally, we compare the comment quality results generated using our JavadocMiner with the quality assessments performed manually by undergraduate and graduate computer science students.

URL	http://spectrum.library.concordia.ca/7300/ [17]
Short Title	Javadoc Miner

Attachment	Size
JavadocMiner.pdf [18]	2.46 MB

Source URL (retrieved on *2025-12-22 06:10*):

https://www.semanticsoftware.info/biblio/assessing-quality-factors-found-line-documentation-written-natural-language-javdaocminer

Links:

[1] https://www.semanticsoftware.info/users/ninus
[2] https://www.semanticsoftware.info/category/blog-tags/computational-lingusitics
[3] https://www.semanticsoftware.info/category/project/tools-resources/gate-components
[4] https://www.semanticsoftware.info/category/blog-tags/java
[5] https://www.semanticsoftware.info/category/blog-tags/javadoc
[6] https://www.semanticsoftware.info/category/blog-tags/javadoc-miner
[7] https://www.semanticsoftware.info/category/blog-tags/nlp
[8] https://www.semanticsoftware.info/category/project/semantic-software-engineering
[9] https://www.semanticsoftware.info/category/topic/nlp
[10] https://www.semanticsoftware.info/category/topic/software-engineering
[11] https://www.semanticsoftware.info/biblio/author/9
[12] https://www.semanticsoftware.info/biblio/keyword/79
[13] https://www.semanticsoftware.info/biblio/keyword/76
[14] https://www.semanticsoftware.info/biblio/keyword/77
[15] https://www.semanticsoftware.info/biblio/keyword/78
[16] https://www.semanticsoftware.info/biblio/keyword/3
[17] http://spectrum.library.concordia.ca/7300/
[18] https://www.semanticsoftware.info/system/files/JavadocMiner.pdf