Abstract

Maintainability of the software is one of the key quality while evaluating software product. Of the overall software development cost, major stake is employed at the maintenance phase. Maintenance time of software is always greater than its development time, so it becomes essential to measure the maintainability of software so that maintenance operational time can be brought down. While going over the prevailing knowledge of literature it is understood that maintenance cost can be regulated by using software metrics at the design phase. There is substantial works in proving that machine learning algorithms is a suitable alternative for many domains of computational sciences including software engineering. This paper is aimed at carrying out a detailed study on the usage of machine learning approaches in the prediction, assessment and evaluation of software maintainability.

References


2. Lientz, B. P., Swanson, E. B., 2000. Software Maintenance Management, Addison -
Wesley Reading, MA.

3. Li, Wei, and Sallie Henry. "Object-oriented metrics that predict maintainability." Journal of
systems and software 23.2 (1993): 111-122


5. Li, Wei. "Another metric suite for object-oriented programming." Journal of Systems and
Software 44.2 (1998): 155-162


maintenance effort of object-oriented systems." Software Engineering, IEEE Transactions on

metrics-an empirical comparison." 20th Working Conference on Reverse Engineering (WCRE).

9. Misra, Subhas Chandra. "Modeling design/coding factors that drive maintainability of

quality prediction using object-oriented metrics." Journal of systems and software 76.2 (2005):
147-156.

11. Stamelos, Ioannis, et al. "On the use of Bayesian belief networks for the prediction of

59-67.

1349-1361.

using software complexity analysis: An extended FRT." Computing, Communication and

object-oriented software maintainability: A comparative study." Software Maintenance and

prediction of software maintenance effort." International Journal of Computer Applications 1.16
(2010).


Learning for Predicting Maintainability Using Object-Oriented Metrics." Multimedia and


Index Terms

Computer Science

Software Engineering

Keywords

Machine learning algorithms, Maintainability Prediction, Software Maintainability Prediction Models and Metrics, Software metrics.