Informatics Institute of Technology

In Collaboration with

University of Westminster

Project Report For

"WhichALGO"

Machine Learning based Algorithm Recommendation System

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Submitted in partial fulfilment of the requirements for the BSc (Hons) Software

Engineering Degree Department of Computing

May 2018

Abstract

In a world of exponentially changing technologies it is the responsibility of the developers to adapt to that new changes and to the learning curve, especially the novice developers. Normally novice developers can find it hard to keep up with that learning curve. One of the hardest sections in learning curves are the fundamental algorithms. Therefore different types of tools and techniques have been introduced to help with that. There is no tool or technique to suggest the fundamental algorithms to the novice developers as they engage with the development which could be used as a method of helping them to learn. This research looks in-depth to the current alternative solutions to identify the above mentioned problem factor and to provide a solution.

As per the solution,WhichALGO, a machine learning based algorithm recommendation system, which is integrated to an IDE as a plugin, helps the novice developers to quickly adopt and learn the algorithms as they engage in development. It mainly uses the One Hot Encoding to identify and recommend algorithms.

Different types of testing were conducted and are mentioned in the Testing chapter while both qualitative and quantitative evaluations are elaborated in the evaluation chapter. At the end of the desecration the final conclusion of the whole project including the limitations and future works are mentioned.

Key words

Machine Learning, One Hot Encoding, Source code analysis, Tokenized, Long Short-Term memory units