

Use of theory of multiple intelligence in selecting career paths of IT graduates

S.M.M. Lakshan* & C.Y. Gamage

*Department of Information & Communication Technology, University of Ruhuna,
Sri Lanka*

**Corresponding author: lakshan.smm@gmail.com*

Abstract

Most students initially decide on a career path without realizing their fields of interest. The proposed career guidance structure helps students in Information and Communication Technology (ICT) stream to understand their skills and what career is best for them. The theory of Multiple Intelligence is used here to identify a person's inner talents and to identify what the person is suitable for. This research focuses on three types of employment in the Information Technology (IT) industry, namely, software development, business analysis, and quality assurance engineering. To develop the model to provide career guidance, a hybrid approach has been used where both technical and non-technical competencies of students are considered. A form-based questionnaire to be used with purposive sampling method was developed and distributed among 300 employees in IT sector to capture data for the study (Multiple Intelligence data and Technical Skills data). A supervised and classified machine learning algorithm known as K-Nearest Neighbor (KNN) was selected with the predefined nature of research. Both technical and multiple intelligence skills of students are considered and models are developed using KNN algorithm. The results of the study showed 95.0% of MI model and 98% of technical skills model accuracies according to the sample data. The main outcome of this study is an employment prediction model based on individuals' respective multiple intelligence and sample technical skills. The model can predict the relevant job category from the answers given to the respective questionnaire list.

Keywords: *Career Guidance, Information and Communication Technology, K-Nearest Neighbor, Multi-Intelligence, Machine Learning*