



**INFORMATICS
INSTITUTE OF
TECHNOLOGY**

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER

Job matching platform to connect Sri Lankan unskilled, low-skilled and semi-skilled job seekers with foreign employment job opportunities

A Project Proposal by

Mr. Abdul Hazzam Mohomed Al Reeza

w1867161/ 20210451

Supervised by

Mr. Anushka Kuruppu

Submitted in partial fulfillment of the requirements for the B Eng (Hons)
Software Engineering degree at the University of Westminster

March 2025

ABSTRACT

The Sri Lankan foreign employment sector faces challenges in matching unskilled, low-skilled, and semi-skilled job seekers with appropriate foreign employment opportunities. The current recruitment process is inefficient, lacks transparency, and often fails to meet job seekers' needs, leading to high turnover rates and dissatisfaction. This research aims to address these issues by developing a job-matching platform that leverages machine learning to improve the accuracy and relevance of job recommendations for Sri Lankan workers seeking foreign employment.

To improve job-matching accuracy, the project uses a hybrid machine learning strategy that combines collaborative and content-based filtering algorithms. The platform can process job seeker profiles and job openings using this methodology, producing recommendations that are specifically suited to each user. The design and development stages were guided by requirements gathered through surveys, interviews, and document analysis, guaranteeing that the platform is usable, accessible, and culturally appropriate for the intended audience.

Preliminary results from testing demonstrate the platform's ability to provide accurate job matches, with key metrics such as the Confusion Matrix, F1 Score, and AUC-ROC used to evaluate its effectiveness. Initial testing shows promise in that the platform can increase job placement rates and meet user needs. This platform provides a scalable solution that fits well with the changing Sri Lankan job market and foreign employment demands.

Subject Descriptors (from ACM)

Information systems → Information retrieval → Recommender systems

Machine learning → Recommender systems → Collaborative filtering

Keywords: Job matching, foreign employment, machine learning, Sri Lankan job seekers, recommender systems