

**SOUTH EASTERN UNIVERSITY OF SRI LANKA**  
**Accelerating Higher Education Expansion and Development Operation**

**WALK – IN – INTERVIEW**

**Freelance Development Assistant (Full Stack) on Contract Basis**

Prospective candidates are invited for a walk-in-interview scheduled to be held on **18<sup>th</sup> of January 2022 (Tuesday), 3.00 PM onwards** at the Operations and Technical Secretariat (OTS), AHEAD Operations, SEUSL, Oluvil for the Post of Freelance Development Assistant on Contract Basis to the AI Enabled System and Methods for the Local Retail Sector (AHEAD/RA3/UBL/SEU/OVAA18), the University Business Linkage Cell of South Eastern University of Sri Lanka.

**1. Required Qualifications & Experience**

- HND in IT or equivalent qualification from a recognized institution.
- Minimum 02 years experience in the IT industry in software or related roles which include native mobile application or java development experience.
- Prior experience in the following technologies would be an added advantage
  - SQLite database, MySQL database. Jasper report, Database synchronization solutions
  - Java Swing or other UI frameworks
  - Java Servlet, JPA, JPQL, Hibernate, Tomcat application server
  - Linux command line
  - Rest architecture
  - Business Process Management (BPM) systems
  - HTML, CSS, JavaScript and JavaScript frameworks, JSON
  - Netbeans, VS Code, Android Studio, My SQL workbench

**2. Required Professional Competencies**

- Ability to transform a set of requirements into software code.
- Ability to understand the users' expectations and requirements.
- Ability to identify and test various usability related issues in software applications

### **3. Other Requirements**

- Availability for work on weekends and holidays.
- Possession of suitable laptop and mobile phone to perform software development and testing. UBL office may provide access to a desktop computer in-office hours. However, its capacity may be inadequate for the required task.

### **4. Method of Selection**

This is a hired freelance service. The Contract of Appointment shall be for the period of assignment of tasks. Selection will be made on a structured walk-in-interview. The walk-in-interview will be held on 18<sup>th</sup> of Jan 2022, 3.00 PM OTS Office, SEUSL.

### **5. Background**

The development of the higher education sector is of central importance to enable Sri Lanka to make the transition from a Lower Middle-Income Country (LMIC) to an Upper Middle-Income Country (UMIC). Recognizing this, the Government of Sri Lanka (GoSL) and the World Bank have agreed to support the higher education sector through a Bank-funded Accelerating Higher Education Expansion and Development (AHEAD) operation.

The University Business Linkage Cell / Tech-Transfer Office (UBL/TTO) of the South Eastern University of Sri Lanka is a dedicated body operating to promote Research, Development, Innovation, and Commercialization of research outcomes from the university to industry and vice versa. During its existence, the UBL has taken steps to identify and promote research and innovation in the university. Parallely, the UBL assists university researchers in increasing collaboration with professional expertise in technology transfer and business model development, establishing open innovation spaces and business incubators, and enabling academics and students to obtain professional business advice and training.

Accordingly, this TOR is meant for obtaining a resource person for freelance development assistance for the AI-Enabled System and Methods for the Local Retail Sector.

### **6. The Operation**

Recent advancements in machine learning and algorithm optimization techniques can be used to reduce hardware requirements thus reducing the cost. For example, instead of expensive specialized barcode readers, cheap off-the-shelf CMOS imaging sensors can be used to read barcodes. These techniques also can be used to improve the usability of the devices. For example, advanced artificial intelligence-based techniques can be used to reduce the number of steps necessary to complete a task by the user. One widely known example is the one-touch fuzzy logic option available in modern

washing machines to eliminate manual entry of wash parameters from the operator.

AI-Enabled System and Methods for the Local Retail Sector project aims to develop systems and methods for the retail sector especially in the area of checkout assistance technologies by using artificial intelligence, hardware, and algorithm optimization techniques, and extensive usability research to increase usability while reducing the cost.

### **7. Objectives of the Freelance Development Assistant Contract**

To hire a freelance development assistant for the research project AI-Enabled System and Methods for the Local Retail Sector under the AHEAD operations.

### **8. Scope of the Freelance Development Assistant Contract**

The project aims to develop Artificial Intelligence enabled systems and methods for the local retail sector. Under this project, the selected resource person is expected to perform the following objective,

- Development of a client-server mobile application prototype for processing invoices using AI technologies.

### **9. Key Tasks and Related Activities**

The key tasks of the resource person are:

<b>Key Task</b>	<b>Required Deliverable</b>	<b>Time Frame</b>	<b>Payment</b>
Implementation of image uploading feature to cloud servers	Working software code	15 days	LKR. 35,000.00
implementation of a suitable image compression technique to upload images to servers	Working software code	15 days	LKR. 35,000.00

### **10. Duration of the Freelance Development Assistant Contract**

The duration of the contract will be on successful completion of the assigned tasks from the date of signing the contract to 30 days.

### **11. Payment Terms**

Payment shall be made on the successful completion of each task as mentioned in section number 05.

## **12. Approval of the Payments**

For services rendered pursuant to TOR, the client shall release the payment to the Freelance Development Assistant upon the approval of the UBL Advisory Board.

## **13. Reporting Obligations**

The resource person performs his tasks under the direct supervision of PI / Director- UBL in the UBL office of the South Eastern University of Sri Lanka.

- Daily attendance to the UBL Office.
- Timesheet for any work performed on the weekends and holidays or work from the home arrangement if there is a lockdown.

## **14. Ownership of the Assignment**

This assignment is funded by the Ministry of Higher Education via AHEAD-OMST under the program component of AHEAD/UBL. As such, the University shall be the owner of the assignment and will reserve the Intellectual Property Rights for all deliverables of the assignment under the terms and conditions given in the IP policy of the University. The resource person will have no right of claim to the assignment or its outputs once it is completed and **no rights** to use **Data and Information** gathered through the assignment for other purposes without written permission from the Vice-Chancellor of the SEUSL. Any Reports/ Data/Information produced as a part of this assignment shall be handed over to the Client in soft and hard formats.

**The Director**

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