**Project registration form**

**Course:**

**Student Name:** **Esoft ID Number:**

**Project Title:** Application for Primary Education for Sinhala, Mathematics and Environment

**Overview**:

Particularly for primary school pupils, environmental education is an essential instrument for creating responsible global citizens.

By incorporating the latest innovations including games, augmented reality (AR) 3D models, and automated image-based identification, the initiative seeks to transform environmental education for students in Grades 1 and 2. Through the integration of various technologies, the initiative seeks to improve evaluation, comprehension, and engagement in three different subjects such as Sinhala, Mathematics and Environment. The goals include creating games as an evaluation tool, integrating AR 3D models for interaction, and detecting home objects, animals, and leaf varieties in gardens. Children can write letters and numbers in accordance with the guidelines, and the system determines whether or not the written response is correct.

The project takes a multifaceted approach, looking into image recognition algorithms and CNN technology as well as using AR 3D models for interaction and visualisation and puzzle games to assess knowledge.  Children are able to capture objects, and the system will display the names of those that they have captured.

The project helps to close the gap between conventional teaching methods and contemporary technological developments in education, encourage young learners to adopt sustainable practices and environmental consciousness, and bridge that gap. Interdisciplinary cooperation, curating AR models, and maintaining long-term user interest are among the challenges. Children can visually perceive the chosen things in their environment as real in three dimensions by utilising that AR technology.

The application's future ambitions include broadening its coverage, improving predictive modelling techniques, and making ongoing improvements based on input from users and educational studies.

**Aims and Objectives**:

**Main Objective:**

Through the use of modern technology, this project’s main objective is to transform environmental education for elementary pupils in grades 1 and 2 for three subjects including mathematics, Sinhala and environment. To produce an immersive educational experience, it makes use of interactive learning mechanisms, augmented reality 3D models, and automatic image-based identification. This strategy is adapted to their stage of development.

**Sub objectives:**

1. **Automated Identification System Using Images –**

Provide powerful image recognition software and algorithms for accurate environmental object detection and classification to enable dependable and effective identification procedures.

1. **Incorporate 3D models by using Augmented Reality (AR) –**

Objects can be visualised using 3D models thanks to the incorporation of AR technology into identification systems, which improves immersive and interactive interactions as well as environmental comprehension.

1. **Design knowledge evaluation tests –**

Create tests that evaluate students' understanding of objects, letters and mathematics. It uses automatic identification, augmented reality visualisation, and game-based assessment to gauge students' cognitive levels.

1. **Personalised learning strategies –**

Analyse user interactions with identification systems and augmented reality models using predictive modelling techniques to create personalised learning strategies that increase engagement and accommodate different learning styles.

1. **Enhance User Experience –**

In order to enhance the integrated system's user experience and interface design, the project entails usability testing and makes use of input from educators and students. Ensure that usability and accessibility features are considered.

**Supervisor’s Name: . .. . . . . . . . . . . . . . . . .**

**(continues overleaf)**

Member of staff only

**The above project topic is approved and I agree to supervise this project.**

***……………………………….. …………………………..***

*Supervisor’s Signature**Date*

**Remarks :**