

**SRI LANKAN TRADITIONAL MASK DETECTION AND  
CLASSIFICATION USING DEEP LEARNING**

**CHARINDU SUPUN NAWUTHTHUDUWA LIYANAGE**

**BSc**

**2022**

## **ABSTRACT**

Cultural & heritage tourism is experiencing historical places, artefacts, and traditions of other civilisations. Cultural and heritage tourism in Sri Lanka is one of the most popular types of tourism available in Sri Lanka. Sri Lankan traditional masks are sought out by tourists, but there is no concrete method to transfer Sri Lankan traditional mask information to tourists.

The development of a mobile application to transfer Sri Lankan traditional mask information is proposed by this research. The mobile application is designed to detect and classify traditional masks using live video footage, for this deep learning is used.

An improved YOLOv5 object detection model is used. This model is developed by adding a Convolution Block Attention Module.

The improved YOLOv5 model achieves faster detection speed with a negligible trade-off of accuracy.

**Key Words:** Object Detection, Image Classification, Sri Lankan Traditional Masks, Heritage Tourism, Cultural Tourism, Mobile Application, Deep Learning,

**Subject Descriptors** - Computing methodologies → Artificial intelligence → Computer vision → Computer vision problems → Object detection