

**PNEUMONIA LABORATORY - DEEP LEARNING BASED  
PNEUMONIA PREDICTION SYSTEM USING  
CHEST X-RAYS**

**Shafras Mohamed**

A dissertation submitted in partial fulfilment of the requirement for  
Bachelor of Engineering (Honours) degree in Software Engineering

**Department of Computing  
Informatics Institute of Technology, Sri Lanka  
in collaboration with  
University of Westminster, UK**

**2020**

## Abstract

Pneumonia is the largest single infectious cause of death among children worldwide.

Publishes from the World Health Organization, In 2017, pneumonia killed 808 694 children under the age of 5, representing 15 percent of all deaths among children under the age of 5.

Throughout South Asia and sub-Saharan Africa, pneumonia affects children and families everywhere, but is most prevalent. Children can be vaccinated against pneumonia, avoided by simple procedures, and treated with low-cost, low-tech medicine and care.

Though Sri Lanka invests higher amounts of national revenue in the health sector, there are few challenges to address, as well as promoting free health. Pneumonia is mainly a increasing concern among deaths of children in Sri Lanka.

Chest x ray research is unfortunately prone to human error, and depends on the expertise of the reader. In reality, a large population mass screening is a time consuming and time consuming process that needs significant effort, if performed manually. The aim of the project is therefore to research and to build a Pneumonia Detector that will help radiologist and doctors to supports and predict pneumonia and also to reduce the amount of human errors.

Kaggle was used as the system's key data source for training the machine learning algorithm to construct predictive data models.

**Keywords:** Pneumonia Diseases, Pneumonia Detector, machine learning

**Subject Description:**