



**INFORMATICS INSTITUTE OF TECHNOLOGY**

In Collaboration with

**UNIVERSITY OF WESTMINSTER (UOW), UK**

# **Cancer Prediction System for Colon and Rectum Cancer**

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Submitted in partial fulfilment of the requirements for the

**BSc (Hons) in Computer Science**

Department of Computing

May 2019

## Abstract

Cancer is one of the leading causes of death worldwide. Each year millions are diagnosed with cancer, and more than half of them die from it. This wide range of disease has standard features in common.

Cancer cells propagate in organs and tissues of the human body without reference to the need of the human body. There are many cancer types that can be identified under the disease name cancer; such as Breast, Lung, Colon and Rectal, Oral, Thyroid, Prostate.etc.

Among them, Colon and Rectal cancer are especially diagnosed worldwide. It is mainly developed in the large bowel and rectal areas, and this cancer type is on the rise in Sri Lanka. If we can detect this cancer type in the early stages, the patient has a 90% survival rate for at least five years. The awareness of the general public towards this cancer type is very low, (only 4 out of 10 can be detected in the early stage). Research has been done to predict the survival rate after diagnosis. However, cooperation between medical and technological fields is limited. The colon and rectal early cancer prediction systems that have been successful combines data mining techniques with demographic risk factors. The colon and rectal prediction system is a web application that was developed using Django. In the main web application, the user acquires input and provides prediction to the user. The prediction uses data mining techniques on top of python language. Data mining related algorithms were implemented using Scikit-Learn framework.

The overall system was tested and evaluated according to the suitable criteria and proved the system is an efficient and accurate one.

**Keywords:** *Data mining, Colon and rectal Cancer early Prediction, Cancer Prediction system*