FINAL YEAR PROJECT REPORT

Canny Canker Detector – A Cancer Diagnosis System

By

Nimra Sikandar	7151	BSE	02-133042-002
Syed Samad Ahmed Bukhari	7159	BSE	02-133042-004
Haris Vohra	7144	BSE	02-133042-036

Supervised by

Faiz - ul - Haque Zeya

Bahria University (Karachi Campus)

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Abstract

Canny Canker Detector is a Cancer Diagnosis tool designed to distinguish cancerous from no-cancerous tissue samples. The aim of the project is to apply algorithms from the area of machine learning and statistics to the gene expression data acquired by using microarray technology to classify tissue samples as either cancerous or non-cancerous.

The cancer dataset consists of rows of values where each row represents a unique tissue sample and each column represents a unique gene. The last column in the set represents the class label representing the cancerous or non-cancerous tissue samples.

Two methods have been implemented in classification of the tissue samples namely the decision tree and the neural network. The results of both the methods have been compared to conclude which method can distinguish samples more accurately.

The tool is a research based application which will hopefully provide other researchers valuable information through the results of the classification.

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