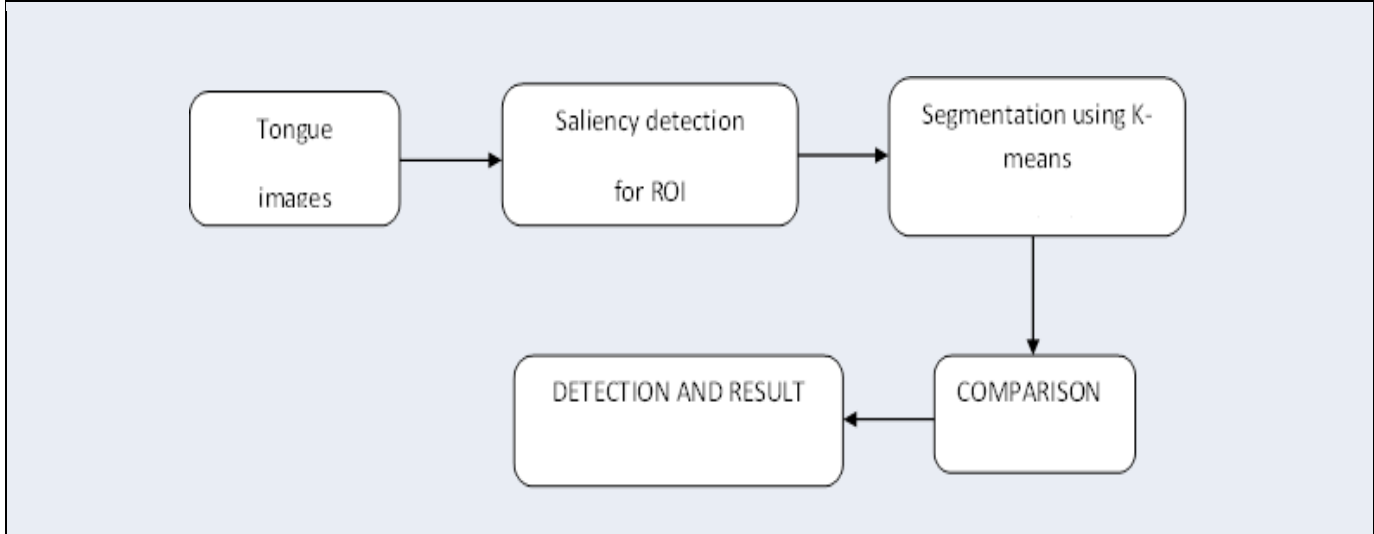


Department of Computer Science and Engineering

PROJECT TITLE	DETECTING DIABETES MELLITUS AND NON-PROLIFERATIVE DIABETIC RETINOPATHY USING TONGUE
STUDENT NAMES	AYISHA HUMAIRA.A GNANASOUNDARI.T
SUPERVISOR	Mrs.T.AMRUTHAVALLI,M.Tech,Assistant Professor
OBJECTIVE	The major objectives of this project are monitoring the sugar levels for the different tongue images of the different patients. So wish the image can be enhanced through a technique named region of interest. Such that the exact portion of the image is removed with higher quality.
ABSTRACT/IDEA	Diabetes mellitus (DM) and its complications leading to diabetic retinopathy (DR) are soon to become one of the 21st century's major health problems. This represents a huge financial burden to healthcare officials and governments. To combat this approaching epidemic, this project proposes a non-invasive method to detect DM and non-proliferative diabetic retinopathy (NPDR), the initial stage of DR based on three groups of features extracted from tongue images. They include color, texture, and geometry. A non-invasive capture device with image correction first captures the tongue images. The images of the healthy and diabetic patients are taken and their area is calculated and stored in the database. This method can separate healthy/DM tongues as well as NPDR/DM-sans NPDR (DM samples without NPDR) tongues using features from each of the three groups. This non-invasive method also avoids complication in detecting the diabetes mellitus.
TECHNOLOGY USED	1. MATLAB Simulation Technology 2. Image Processing

WORKING STEPS	<ol style="list-style-type: none"> 1. Saliency Detection 2. K-Means Algorithm
REQUIREMENTS	<ol style="list-style-type: none"> 1. Web camera or any capture device 2. MATLAB 7.10(R2010a)

SYSTEM ARCHITECTURE



BENIFITS	<ol style="list-style-type: none"> 1. Quick Results is obtained. 2. This application is a non-invasive method where there is no pain to the patients 3. It requires only the tongue capture device.
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SCREEN SHOTS



Diabetic Tongue



Healthy Tongue