

GATAMANNA ARACHCHIGE ISURI UWANTHIKA

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EDUCATIONAL QUALIFICATIONS:

Postgraduate Qualifications:

Degree:	M.Sc. in Computer Science (Reading)
University:	Postgraduate Institute of Science, University of Peradeniya, Sri Lanka
GPA:	3.61 (out of 4.0) – Coursework Pending for Research
Duration:	2017 to present

University Education:

Degree:	B.Sc. Special Degree in Computer Science and Technology
University:	Uva Wellassa University of Sri Lanka
Duration:	2013 to 2017

ACADEMIC DISTINCTIONS & MEDALS

A Merit scholarship for the performance in course work of the MSC in Computer Science
2017/ 2018 - Postgraduate Institute of Science, University of Peradeniya, Sri Lanka.

WORK EXPERIENCE

Instructor Grade (II)	Department of Computer Science, General Sir John kotelawala Defence University (2020 January to Present)
Lecturer (Temporary)	Department of Computing, Rajarata University of Sri Lanka. (2017 June to 2019 December)

Tutor	Online External Degree, Rajarata University of Sri Lanka. (2017 August to 2020 June)
Demonstrator	Department of Physical Science, Rajarata University of Sri Lanka (2017 February to 2017 June)
Software Engineer (Intern)	LOLC Technologies

PROJECTS

- A Systematic review and comparison study of Electronic Medical Record (EMR) Systems to support healthcare**

EMR grants the electronic entry, upkeep and perpetuation of medical information of patients over long periods which in turn provides quality care and safety in healthcare organizations. Nevertheless, EMRs have been a huge leap in the medical field, where hospital records are computerized for the betterment of patient care. In fact, EMRs are ought to reduce the manual work done and upgrade the efficiency in healthcare systems. Through this project it has aimed to identify the insights along with the features and functionalities to be included when implementing a quality and an innovative EMR.
- An Automatic Smart Medical Box using IoT and Android**

Medicines will not work unless they are taken regularly on the correct time and the correct amount. But we tend to forget to intake tablets on the prescribed times because of our busy lives. In the case of elders, naturally, they lose their memory power with the time. As a result of that, it has proposed a Smart Medical Box (SMB), which is designed to help the elder patients. SMB's automatic alarm ringing system will remind the patient during the prescribed time. This system can be maintained and monitored via an Android application which is SMB app. SMB is enriched with other features like child safety, automatic doctor appointment fixing, emergency alert and location tracking. The SMB is to take care of the elders' medication. SMB is efficient and reliable, it is available with a patient 24/7. It is full safe and a very useful gift to senior citizens.
- Speech Recognition based Interactive Web Application for Autism Spectrum Disordered Children**

From the years, scientists and engineers have studied the phenomenon and formation of speech with the intention of developing natural language systems which allow users to interact with machines, in human speaking language. Speech recognition technology and Natural Language Processing are one of the fast-growing engineering technologies.

This project aims to develop an interactive web application with speech recognition technology which is capable of identifying pre-trained keywords, using TensorFlow and Keras. The architecture of the speech recognition model is built on the Deep Learning and Convolutional Neural Network.

- Automated fire rescue system using iot for a confined Area**

Human and resource losses which are caused by fire accidents are irreplaceable. Each blaze begins with a flame and with time, it will turn into a fire which ruins its surrounding. In order to reduce the damage, the fire should be extinguished in its early stage. The particular study has aimed to develop an Automated Fire Rescue System to overcome this issue. It has focused on two main tasks: real-time surveillance of the confined area and automated alert passage to the predefined people.
- Face Recognition using Facial Landmark Coordinates**

There are various methods available to ensure the security of a system. In order to ensure the security, the system should identify a person using the system and authenticate him. Face Recognition is a method of controlling access or authentication of a certain set of people to a system or data that is needed to be protected. Face recognition defines the capability of a computer-based system to detect and verify a person in an image frame or a video feed. Numerous applications with face detection and recognition are used in today's world. With the advancement of the technology, Deep Neural Networks are widely used for recognizing faces with considerable confidence. Rather than using a neural network, a face recognition system based on the facial feature geometry is introduced in this paper. A new method is proposed to recognize the detected frontal faces using dlib's frontal face detector, based on the area of triangles formed according to the coordinates of facial landmarks.
- A comparative analysis on different classification techniques for breast cancer risk prediction**

This study was conducted by using four main algorithms with the help of the Wisconsin Breast Cancer (original) dataset and compared the efficiency and effectiveness of those algorithms according to the accuracy, simulation error rate, precision, sensitivity, and specificity.
- Computational genomic analysis to reveal marker genes of oral cancer**

This is a bioinformatics related research which was mainly conducted to reveal the stage specific genes as well as molecular sub classes of oral cancer. R programming environment was mainly used with several other bio conductor packages. Apart from that Cytoscape software and Expression Correlation plugin were used.
- Online vehicle tracking system**

This System is deployed as a web based mobile application where the client is able to track his fleet from anywhere. It is composed of several modules such as login, notification, real-time map, backup, reporting together with a user-friendly set of activities. MongoDB, JavaScript Object Notation (JSON), MEAN stack technologies such as node.js and angular.js used as technologies.
- Self-Learning Error Handling System for Servers.**

This system solves the problems that the system analysts face in prevailing systems. Through this system it's really easy to find the old code level changes. If and only if new error occurs

it will allow analysts to add solution. HTML, JavaScript, PHP, Prolog and MySql used as technologies.

- **Student Information System.**

This is a system that students can achieve their results and time tables without having a notice board. And also online subject registration and online examination registration is there in this system. PHP, JavaScript, jQuery and MySql used as technologies.

- Extraction of cancer cells from prostate cancer using Digital Image processing.

This system extracts the cancer cells by using segmentation technique. MATLAB was the core software used in there.

RESEARCH & PUBLICATIONS

Publications:

Shafana A.R.F., Uwanthika G.A.I., Kartheesvaran T., Exploring the Molecular Sub-classes and Stage-specific Genes of Oral Cancer: A Computational Genomic Analysis Approach, Journal of Cancer Treatment and Research Communications (**Under Reviewing Process**)

TA Gamage, WNS Dabarera, KKH Nethmini, GAI Uwanthika, Dr. LP Kalansooriya
A Systematic review and comparison study of Electronic Medical Record (EMR) Systems to support healthcare, 13th International Research Conference (IRC-2020)

S. Sajeevan, M. Sankavi, G.A.I.Uwanthika, G. Tharsika, N.S.Weerakoon, “An automatic Smart Medical Box using IoT and Android”, International Research Conference on Smart Computing and System Engineering (SCSE - 2020)

Fanoon A.R.F.S, Uwanthika G.A.I., “Part of speech tagging for twitter conversation using conditional random fields model”, International Research Conference on Smart Computing and System Engineering (SCSE - 2019).

Muiza M.M.R, Waseem A.A.M, Nihla M.N.F, Nuha M.J, Anzira M.A.A, Uwanthika G.A.I, Weerakoon N.S., “Automated Fire Rescue System Using Iot for A Confined Area”, 9th International Symposium (IntSym 2019).

Fanoon A.R.F.S, Uwanthika G.A.I., “A Study on Green Cloud Computing: Approaches and Strategies”, Open University Research Sessions (OURS 2019).

Shafana A.R.F., Uwanthika G.A.I., “Critical analysis on the computational tools for the genomic analysis of oral carcinoma”, 7th International Symposium (IntSym -2017).

Fanoon A.R.F.S, Uwanthika G.A.I., “Big Data Analytics: Challenges, Technologies and Key Applications”, 8th Annual International Research Conference- 2019 (AIRS- 2019)

Fanoon A.R.F.S, Uwanthika G.A.I., “Speech Recognition System For Tamil Language Using Cmusphinx”, 9th International Symposium (IntSym 2019)

Ongoing:

A Comparative Analysis on Different Classification Techniques for Breast Cancer Risk Prediction

SKILLS AND COMPETENCE

- Excellent Interpersonal skills and Communication skills in both English and Sinhala.
- An excellent team member who is eager to work in a group with a record of presentation and liaison capabilities.
- Self-confidence and ability of facing challenges.
- Skilled in time management and good sense of responsibility

EXTRA-CURRICULAR ACTIVITIES

Professional Level:

- Student Branch Counselor of WIE affinity group at General Sir John Kotelawala Defence University
- Member of IEEE Student Branch at General Sir John Kotelawala Defence University
- Member of International Relations and Operations Board at General Sir John Kotelawala Defence University
- Member of Invitation and Registration Committee at KDU IRC 2020
- Student Branch Counselor of IEEE Student Branch at Rajarata University of Sri Lanka
- Committee member in Undergraduate Student Symposium in Rajarata University of Sri Lanka
- Member and participator of Curriculum Revision workshop - 2019 at Department of Computing, Rajarata University of Sri Lanka
- Third Year Group Project Coordinator at Department of Computing, Rajarata University of Sri Lanka
- Coordinator in A/L Science Practical workshops conducted by the Faculty of Applied Sciences, Rajarata University of Sri Lanka in 2017 and 2018

University Level:

- Member and Course Coordinator of the IEEE student branch, Uva Wellassa University of Sri Lanka
- Degree Representative
- Member of the Art club
- Participated in IEEE Xtreme Programming Competition 9.0 24th October 2015 organized by IEEE student branch of Uva Wellassa University.
- Member of the Computer Society

- Participated in Aces V5.0 12h Hackathon organized by Faculty of Engineering, University of Peradeniya.
- Participated in Deft Coders 12h Hackathon V2.0 organized by Computer Society of Uva Wellassa University.

School Level:

- Member of the Media Unit
- Member of the English Circle
- Member of the School Eastern Band



Uwanthika G.A.I.

13.12.2020