

EDUCATION

- **University of Moratuwa** Moratuwa, Sri Lanka
Bachelor of Science Honors in Electronic and Telecommunication Engineering; GPA: 4.02/4.2 Nov. 2014 – Present
- **Pearson**
Diploma in Information Technology Jan. 2014 – Aug. 2014
- **Visakha Vidyalaya** Colombo, Sri Lanka
GCE Advanced Level (Sri Lanka) 2013; Mathematics:A, Physics:A, Chemistry:A Aug. 2011 – Aug. 2013

EXPERIANCE

- **LiveLabs Urban Lifestyle Innovation Lab** Singapore Management University, Singapore
Research Assistant (full-time) July 2017 - December 2017
 - **Energy Harvesting and Localization using WiFi:** Main purpose of this research is to develop a battery free device which can harvest energy from Wi-Fi signal using signal beam forming and able to give alert to an external party in case of fall of the wearer.
 - **Hand Gesture Recognition and Gesture Tracking:** This research project explores the possibility of using wrist-worn devices (specially, a smartwatch) to accurately track the hand movement and gestures.
- **Muturify** 99x-Technologies
Trainee (part-time) September 2018 - Present
 - **Recommender System:** Building a recommender system for a automatic learning suggestions using machine learning methods.

PUBLICATIONS

- Tran, V.H., Misra, A., Xiong, J. and **Hirunima, N.**, 2017, November. Can WiFi Beamforming Support an Energy-Harvesting Wearable?. In Proceedings of the Fifth ACM International Workshop on Energy Harvesting and Energy-Neutral Sensing Systems (pp. 14-20). ACM.

PENDING PUBLICATIONS

- Jayasundara, V., Jayasekara, S., **Jayasekara, H.**, Rajasegaran, J., Rodrigo, R. and Seneviratne, S., 2018. TextCaps: Handwritten Character Recognition with Very Small Datasets. Winter Conference on Applications of Computer Vision (WACV).
- Jayasundara, V., **Jayasekara, H.** and Rodrigo, R., 2019. Capsule Networks: Routing Algorithms and Applications. Arxiv.

ON GOING RESEARCHES

- Deep Capsule Networks: Going Deeper with Capsule Networks.
- Time Capsule Network: Introduce temporal variations into capsule network.
- Non-invasive user tracking systems: Autonomous User Authentication, Activity Classification and Localization using Device free WiFi Sensing

RESEARCH INTERESTS

- Machine Vision and Image processing
 - Deep Learning Techniques
 - * Deep Learning Architectures
 - * Image Classification
 - * Object Detection

- Natural Language Processing with Deep Learning
 - Audio signal processing
- Non-invasive authentication systems
- Micro-Doppler signatures and applications with Wireless Communication technologies

SKILLS

- Python-NumPy ,scikit-learn, Pandas, matplotlib
- Keras, TensorFlow
- MATLAB 2016b
- MongoDB
- LaTeX
- Verilog
- Arduino

EDUCATIONAL ACHIEVEMENTS

- I obtained the second highest overall marks from the semester 1 field selection examination of the B.Sc. Eng. Hons. Degree of the University of Moratuwa, from over 700 candidates.
- I have received several class prizes and subject prizes at the annual award ceremonies of Visakha Vidyalaya.

CO-CURRICULAR EDUCATION

- Certificate course in Machine Learning offered by Stanford University via Coursera online.
- Certificate course in Deep Learning offered by Stanford University via Coursera online.
- Certificate course in Internet of Things offered by IBM via Coursera online.

ENGINEERING RELATED ACHIEVEMENTS

- Winner - Robotics competition 2016 organized by the IEEE WIE student branch affinity group, University of Moratuwa.
- Finalist - Robofest 2016 Robotics competition organized by the Sri Lanka Institute of Information Technology.
- Finalist - Inspire Sri Lanka:A tech competition organized by Mobitel Innovation Centre.

EXTRA-CURRICULAR ACTIVITIES

- I was the former secretary of the Industrial Applications Society (IAS) of University of Moratuwa, for the year 2017/2018.
- I conducted Robotics workshops for university students in association with the WIE of University of Moratuwa in 2016.
- I am an active member of the IEEE student branch and the WIE of the University of Moratuwa. I was on the organizing committee of several events such as Code Experts 2017.

PROFESSIONAL AFFILIATIONS

- Student Member of Institution of Engineers Sri Lanka.
- Student Member of Institute of Electrical and Electronics Engineers (IEEE), IEEE Industrial Applications Society (IAS), IEEE Power & Energy Society (PES), IEEE Women In Engineering Affinity Group

SCHOLARSHIPS

- Arthur V. Dias Memorial award in 2013 for higher academic achievements in GCE Advanced Level examination.
- The Public Service Mutual Provident Association Scholarship for highest academic achievements in 2013 GCE Advanced Level examination.

NON-RELATED REFERENCES

Prof. Archan Misra

B.Sc. Eng. Hons. (IIT), M.S. (UMD), Ph.D. (UMD)

Professor of Information Systems, Associate Dean (Research), Director-Centre for Applied Smart-Nation Analytics, Lee Kuan Yew Fellow.

School of Information Systems, Singapore Management University, Singapore.

☎ +65 68085202

✉ archanm@smu.edu.sg

Dr. Ranga Rodrigo

B.Sc. Eng. Hons. (Moratuwa), M.E.Sc. (Western), Ph.D. (Western), MIET, MIEEE

Senior Lecturer, Department of Electronics and Telecommunication Engineering,

University of Moratuwa, 10400, Moratuwa, Sri Lanka.

☎ +94 11 264 0422

✉ ranga@uom.lk

Dr. Tharaka Samarasinghe

B.Sc. Eng. (Moratuwa), Ph.D. (Melbourne), MIEEE

Senior Lecturer, Department of Electronics and Telecommunication Engineering,

University of Moratuwa, 10400, Moratuwa, Sri Lanka.

☎ +94 71 535 6144

✉ tharaka@ent.mrt.ac.lk

Dr. Chamira U. S. Edussooriya

B.Sc.Eng. (Moratuwa) M.A.Sc., Ph.D. (UVic), MIEEE

Senior Lecturer, Department of Electronics and Telecommunication Engineering,

University of Moratuwa, 10400, Moratuwa, Sri Lanka.

☎ +94 11 265 0301 ext 3316

✉ chamira@ent.mrt.ac.lk