

Thevindu Dilmith Samarasekera - Curriculum Vitae

Personal Website

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📍 Colombo, Sri Lanka

Education

- **Bachelor of the Science of Engineering Honours (B.Sc. (Hons) Engineering) (Mar 2021 - Aug 2025)**
Specialized in Electrical and Electronic Engineering
Faculty of Engineering, University of Peradeniya
Graduated with **First Class Honors**
GPA: 3.80/4.0
Complete degree program was conducted and assessed in **English medium** and accredited by **Washington Accord**.
- **Diploma in International Relation (2022)**
Bandaranaike Centre for International Studies Graduated with a Merit
- **Chartered Institute of Management Accountants (2020 - 2021)**
Operational level completed
- **Primary and Secondary Education (2006–2019)**
S. Thomas' College, Mt. Lavinia
Completed entire primary and secondary education in **English Medium**)
- **G. C. E Advanced Level Examination (University Entrance Examination) (Aug 2019)**
2 Distinctions 'A' passes (for: Combined Mathematics, and Chemistry) 1 'B' pass (for: Physics)
Z-Score: 2.1104
- **G. C. E. Ordinary Level Examination (Dec 2016)**
9 Distinctions 'A' passes

RESEARCH PUBLICATIONS

International Conferences

- Vision-Based Phenotyping and Neural ODE Modeling of Tea Plant Dynamics
Computer Vision and Pattern Recognition Conference (CVPR) 2026
J.M.T.R.B Navarathne, Buwaneka Epakanda, **Thevindu Samarasekera**, Janaka Ekanayake, Roshan Godaliyadda, Mervyn Parakrama Bandara Ekanayake
(Under Review)
- Computer Vision-Based Remote Monitoring System for Phenotyping and Analysis of Tea.
19th International Conference on Industrial and Information Systems
Buwaneka Epakanda, Tharinda Navarathne, **Thevindu Samarasekera**, Janaka Ekanayake, Roshan Godaliyadda, Parakrama Ekanayake
(Accepted)
- Remote sensing and computer vision for tea Agrovoltaic optimization
International Conference on Climate Change and Agriculture in Tropical Latitudes, May 2025, Colombo, Sri Lanka
B. A. B. Epakanda, J. M. T. R. B. Navarathne, **T. D. Samarasekera**, J. B. Ekanayake, V. R. Herath, G. M. R. I. Godaliyadda, and M. P. B. Ekanayake

POSTER PRESENTATIONS

- **AgroVision - Light Regulation of an Agrovoltaic Plant-** iPURSE 2025, Dept. of Animal Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka. August 28-29, 2025. Presented a Remote Monitoring, Dynamic Growth Modeling and Light Control Strategies for Tea Agrovoltas.
- **Wearable Device and AI based Analysis for Human Motion Capture-** iPURSE 2025, Dept. of Animal Science, Faculty of Agriculture, University of Peradeniya, Sri Lanka. August 28-29, 2025. Presented a non-intrusive wireless wearable device utilizing IMU sensors to monitor human activity through AI-based algorithms.

PROJECTS (*Selected / Reverse Chronological Order*)

Understanding the Relationships between Environmental Parameters and Plant Parameters in Tea (Ongoing)

- Working as a Research Assistant at Multidisciplinary AI Research Center (MARC) for this project.
- Using graph theory and unsupervised clustering algorithms to cluster and identify patterns between the variation of environmental parameters and plant parameters which affect the growth of tea.
- Supervised by Prof. Janaka Ekanayake, Prof. Roshan Godaliyadda, , Prof. Parakrama Ekanayake, Prof. Vijitha Herath, Prof. Lasantha Weerasinghe (Dept. of Crop Science, Faculty of Agriculture, UoP)

Analysing and Benchmarking Weightlifting and other Sports/Outdoor Activities using a Wearable Device (Ongoing)

- Collecting IMU data using a wearable device, collecting video data and other personal data of Commonwealth, National, and Amateur weightlifters.
- Utilizing a human motion model, signal processing and clustering algorithms for pattern Recognition
- Defining a performance space and performance Benchmarking
- Supervised by Prof. Roshan Godaliyadda, , Prof. Parakrama Ekanayake, Dr. Asela Ratnayake (Sports Medicine Specialist Doctor, Kandy General Hospital)

Modeling and Interpretation of Non-linear Growth Dynamics of Tea Plants

- Using phenotypic information from tea plants to model the non-linear growth dynamics utilizing Neural ODEs
- Interpreting the modeled growth dynamics using mathematical equations for tea growth derived from phenotypic data.
- Supervised by Prof. Janaka Ekanayake, Prof. Roshan Godaliyadda, , Prof. Parakrama Ekanayake, Prof. Vijitha Herath, Prof. Lasantha Weerasinghe (Dept. of Crop Science, Faculty of Agriculture, UoP)

Light Sensing and Control of an Agrovoltaic Plant

- Final Year Undergraduate Project
- Designed and implemented a semi-wireless comprehensive remote monitoring system for an agrovoltaic plant
- Performed tea phenotyping through image processing and segmentation
- Designed optimum light control strategies to have a more predictable tea yield
- Supervised by Prof. Janaka Ekanayake, Prof. Roshan Godaliyadda, , Prof. Parakrama Ekanayake, Prof. Vijitha Herath

Human Motion Capture through a Wearable Device

- Designed and developed a wireless ergonomic, low cost wearable device for human motion capture using IMU sensors
- Developed sensor fusion algorithms (PCA, EKF) for accurate estimation of dynamic joint-angle variations
- Supervised by Prof. Roshan Godaliyadda, Prof. Parakrama Ekanayake, Dr. Chanaka Senanayake, Dr. Pramila Gamage, Prof. Vijitha Herath

Keyless and Buttonless Passive Entry Passive Start (PEPS) System (*Individual Project*)

- Designed a Passive Entry Passive Start system for the new car at Vega Innovations (Pvt) Ltd.
- Used Bluetooth Low Energy (BLE) technology for implementation.

IR-based Pulse Monitoring Device (*UG*)

- Designed and developed Wearable pulse-wave and heart-rate acquisition device using IR sensors as part of the EE251 course project.

Modularized Surveillance Camera (*UG*)

- Designed and developed a modularized surveillance camera using ESP32-CAM module as part of the EE356 course project

Camera which tracks objects with Embedded Systems (ATmega328P) (*UG*)

- Designed and developed a camera which tracks objects(moves with objects) using Embedded Systems (ATmega328P) as part of the EE322 course project.

HONORS AND AWARDS

National Research Awards

- National Winner — Best Innovative Project in HealthTech
SLASSCOM National Ingenuity Awards 2025
This award was won amidst competition from Universities and Cooperates all over Sri Lanka
- Central Province Winner — Best Innovative Project in HealthTech
SLASSCOM National Ingenuity Awards 2025
This award was won amidst competition from Universities and Cooperates all over Sri Lanka
- Central Province Winner — Best Innovative Undergraduate Project
SLASSCOM National Ingenuity Awards 2025

University Awards

- Prof. E.F. Bartholomeusz Award for the Best Project on Engineering Mathematics in University of Peradeniya

National Competition Wins

- 1st Runner Up — Brainstorm 2023
National Competition on Biomedical Engineering Projects *organized by IEEE Student Branch of University of Moratuwa*
The project was a motion capture device based on hall effect sensors
- 1st Runner Up — ACES Hackathon 2023
Product Design Competition *organized by Association of Computer Engineering Students, University of Peradeniya*
The project was a motion capture device based on hall effect sensors

Scholarships and other academic awards

- Global DNA - Gold award by MT Studio - 2019
- Award for Best grades in Combined Mathematics - 2019
For achieving the highest marks for Combined Mathematics at *S. Thomas' College Mt. Lavinia*
- Award for the Best student in class - 2019, 2018, 2017
For achieving the highest grades in class at *S. Thomas' College Mt. Lavinia*
- David Paynter Memorial Prize for Art - 2016

- Prize for Art - 2016, 2010
For receiving the highest marks for Art at *S. Thomas' College Mt. Lavinia*
- Wisdom Business Academy Scholarship Awarded by the Wisdom Business Academy in 2016

Skills

Technical Mathematics and Engineering; Machine Learning; Programming Languages (Python, C, C++; Assembly (ATmega328p)); System Architectures (ATmega, STM32, ESP, TI);

Professional Management and Leadership; Public Speaking; Organizational Diplomacy; Accounting

Work and Teaching Experience

Multidisciplinary AI Research Center - MARC

Research Assistant (*Sept 2025 - Present*)

- Working as a Research Assistant focusing on AI applications in Biomedical Wearables and Agritech.
- AI for Bio-Med Wearables Research Group: Non-invasive IMU Based wireless Wearable device to track human motion utilizing signal processing and machine learning algorithms.
- AI for Agritech Research Group: Modelling plant growth dynamics, Identifying patterns between plant parameters and environmental parameters
- Involved in interdisciplinary collaborations with the Kandy General Hospital, Manufacturing Engineering Department, Physiotherapy Department, Crop Science Department, Botany Department, and Tea Research Institute.
- Main Supervisors: Prof. J.B. Ekanayake, Prof. G.M.R.I. Godaliyadda, Prof. M.P.B. Ekanayake

South Asia Gateway Terminal Ltd.

Engineering Intern (*(2024) — 12 weeks*)

- Successfully completed my internship under supervisor Eng. Janith Chamikara which was mainly based on understanding the major engineering projects and infrastructure at SAGT Terminal in the Colombo Port, and projects based on PLCs

Vega Innovations (Pvt) Ltd

Electronic Engineering Intern (*(2023) — 12 weeks*)

- Successfully completed my internship under supervisor Eng. Rusira Dharmarathne. My work was regarding end to end product development with PCB designing, working with STM32 and Texas Instruments microcontrollers

H-Connect (Pvt) Ltd.

Finance Intern (*(2020) — 16 weeks*)

- Successfully completed my internship as a management accountant on Accounts Receivables for a few of Hirdaramani group's apparel companies

S. Thomas' College, Mt. Lavinia

Teaching Assistant (*(2019) — 16 weeks*)

- Served as a teaching assistant for English Medium GCE A/L (University entry exam) students studying Combined Mathematics, Physics and Chemistry

Professional Skills and Activities

Public Speaking Achievements

- Delivered a **TEDx talk** titled “*Dip it or Pour it*” (2019)
- Overall **Champion** — National Public Speaking Competition “Avra Kadabra” (2018)
- **Champion** — Prepared Speech category “Avra Kadabra” (2018)
- **Champion** — “Speak Up” National competition (2017)
- **1st Runner Up** — Speech Evaluation category “Enliven” (2019)
- **2nd Runner Up** - Evaluation Speech Contest of Division I District 82 Toastmasters International (2025)
- **1st Runner Up** - Evaluation Speech Contest of Area I3 District 82 Toastmasters International (2025)
- **1st Runner Up** - Evaluation Speech Contest of Central Link Toastmasters Club in District 82 Toastmasters International (2025)
- Conducted many Youth Public Speaking and Leadership Workshops around Sri Lanka
- Active member — Central Link Toastmasters Club
- Master of Ceremonies in many events such as UNICEF session at Sri Lanka Model United Nations conference in 2017.

Organizing Major Events

- Youngest Executive Committee Member — Sri Lanka Model UN (2017)
This is South Asia’s largest Youth Conference. I chaired the International Press Coorps (IPC)
- Executive Committee — Gavel Conference Sri Lanka (2017)
3 Day residential (scouting jamboree style) conference organized for the first time ever. I was involved with finance, logistics and overall event planning and management.
- Head of Finance — Gavel Conference Sri Lanka (2018)
Headed the Finance team for a large 3 day residential conference. Planned and managed all finances.

Initiated Societies and volunteer organizations

- Gavel Clubs of Sri Lanka (2017)
I am a **charter member** of this umbrella body for all Gavel Clubs of Sri Lanka
- Gavel Club of S. Thomas’ College(2019)
I am the **charter Vice President Education** and later the **President** of this Gavel Club. During my terms, I initiated many events, systems and made it one of the most outstanding gavel clubs in Sri Lanka through many competition winning public speakers, organizing new initiatives and serving the school.
My work has been recorded in the book titled ”100 Years at Mount” alongside oratory greats of Sri Lanka including S.W.R.D.Bandaranaike and Dananjaya Hettiarachchi.

Volunteering (Selected)

- Senior House Prefect — Stone House of S. Thomas’ College, Mt. Lavinia
- Vice President — Innovation Club of S. Thomas’ College, Mt. Lavinia
- Director (Finance & Partnerships) — Rotaract Club of University of Peradeniya
I started many initiatives and was awarded the Rotaractor of the Month Award by the Rotary Club of Kandy
- Team Leader (Business Development) — AIESEC in University of Peradeniya
- Committee Member — Mathematics Society of University of Peradeniya
- Committee Member — Vibhawa Literary Association of University of Peradeniya

Art, Drama, and Creative Work

- Winner — “David Paynter” Memorial Prize (2016)
- Won multiple national-level art competitions
- Acted in and directed Sinhala and English theatre productions

Sports Achievements

Member of the following **Senior Sports Teams** at S. Thomas' College, Mt. Lavinia:
Badminton, Swimming, Diving, Water Polo, Cricket, Soccer (Junior)

Completed Mount Lavinia **2-mile Sea Swim** (2017)

University of Peradeniya Men's Swimming Team member

- 1st Runner Up — Inter University Games (2022)
- 2nd Runner Up — Sri Lanka University Games (2023)
- Overall 1st Runner Up — Sri Lanka University Games Swimming (2023)

Training Programs and Special Initiatives

- Project Lead — **#AboutTime Gender Equality Campaign** (2018)
Started and lead a gender equality campaign in Sri Lanka titled **#AboutTime** focusing on street harassment, domestic violence and cat calling
- Participant — Coffee with CEO (MT Studio, 14 weeks, 2019)
An exploratory learning program with top CEOs of Sri Lanka.
- Completed Leadership Training Program conducted by High Five Consultancy (10 weeks, 2018)
- Participated in the “Success in Communication and Presentation” program conducted by Mr. Dananjaya Hettiarachchi the 2014 **World Champion of Public Speaking** in 2017. (2 weeks)
- Participated in the “Success in Leadership and Communication” program conducted by Toastmasters International in 2016. (10 weeks)

Referees

Prof. J. B. Ekanayake Chair Professor, Department of Electrical and Electronics Engineering, University of Peradeniya
Mobile: +94 77 714 6979

Prof. G.M.R.I.Godaliyadda Professor, Department of Electrical and Electronics Engineering, University of Peradeniya
Mobile: +94 77 770 9035

Prof. M.P.B. Ekanayake Professor, Department of Electrical and Electronics Engineering, University of Peradeniya
Mobile: +94 77 364 8882

Prof. J. S. Malik Peiris School of Public Health, University of Hong Kong
Mobile: +852 9389 3736