Education

◆ **University of Moratuwa**
Undergraduate
- BSc. Engineering Honours, Bio-Medical Engineering.
- GPA: 3.81

Govt. Science College.
- G.C.E A/Ls - Physical stream.   3As.
- G.C.E O/Ls   9As.

Machine Learning Specialization by Deeplearning.AI

Skills

- PCB Designing : Altium Designer, EasyEDA
- 3D Modeling   : Solidworks
- Signal Processing
- Language Tools : Python, C++, verilogHDL, Spice
- VLSI/Tapeout Design : MagicVLSI
- Git/Github
- Softskills : Video Editing, Leadership skills

Sajitha Madugalle

Biomedical Engineering Undergraduate, University of Moratuwa, Srilanka

About Me

A dedicated 3rd year biomedical Engineering Undergraduate at the University of Moratuwa, skilled in electronic circuit design, PCB design, and biosignal processing.

Contact Me

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Projects

- **Portable Analog ECG Monitor**
  Developed a bio-signal acquisition device with on-board signal filtering and a digital system for real-time visualization of ECG waveform.
  (PCB designing, Signal Processing, 3D designing)

- **Vibration Analysis Systems for Robot arms**
  A vibration acquisition device for a robotic arm, utilizing MATLAB for signal analysis and calculating damping factors through FFT, PSD, and FRF techniques.
  (PCB designing, Signal Processing)

- **EOG based Drowsiness Detection System**
  An end-to-end drowsiness detection commercializable device using EOG signals.
  (RF PCB designing, Signal Processing, Machine Learning)

Interest areas:

- PCB designing
- Bio signal processing
- Electronic circuit design
- HCI
- Embeded Systems

Languages

- English
- Sinhala

Soft Skills

- Leadership Skills
- Time management
- People Managment

References

Chamira U. S. Edussooriya
BSc Eng (Moratuwa), MASc (UVic),
PhD (UVic), MIEEE
Senior Lecturer
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Telecommunication Engineering
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Rukshani Liyanaarachchi, PhD
Senior Lecturer
Department of Electronic and
Telecommunication Engineering
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- **Pedobarography using plantar pressure distribution**
  A proposed concept for a gait abnormality monitoring device that measures plantar pressure distribution in real-time.
  Semifinalists - Brainstorm '22

- **Reading Companion**
  captures and reads active windows in real time using OpenCV and Tesseract OCR. Integrated with the Gemini API, it provides browsing shortcuts for readers, enhancing efficiency in exploring digital content.
  (Computer Vision, Optical Charactor Recognition, AI)

- **Simulating Nerve signal and Body Electrical activities**
  Simulation of dendric tree, and hodgkin-Huxley to analys Electrical signals in nerves

Volunteering Experiences

- **Co-Chair person for Brainstorm 2024**
  Brainstorm is the premier healthcare innovation challenge in Sri Lanka organized by the IEEE EMBS student chapter of the University of Moratuwa

- **Organizing Committee Member of Academic pillar in ENIGMA 2024**
  Enigma is a mathematics-based coding hackathon that hosts challenges in advanced mathematical concepts. It was organized by the Mathematical Society of the University of Moratuwa

- **Electronic Club**
  Workshop Presenter for SLRC 2024

- **Senior Prefect**   Govt. Science College, Matale.

- **School Chess Team Captain**
  Sri Chandananda Buddhist College, Kandy.

Awards and Certifications

- **Dean's List Honors, Faculty of Engineering, University of Moratuwa**
  Semester 1 (SGPA 4.00) and Semester 2 (SGPA3.93)

- **National Microelectronic Olympiad - Sri Lanka Chips Challenge IEEE**
  Top 10

- **School Colours for Chess**
  Sri Chandananda Buddhist College, Kandy.