Sandun Siwantha

Associate Electronic Engineer

I'm a motivated student, majoring in electronics, physics, pure mathematics, and computer studies. My passions include circuit design, programming, robotics, and innovation, coupled with strong problem-solving skills. I thrive on transforming ideas into reality and am eager to gain hands-on experience to contribute to innovative teams. My goal is to drive R&D innovation, addressing industry challenges.

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📍 Colombo, Sri Lanka   📅 06 November 2000

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EDUCATION

BSc in Physics and Electronics   **(2021 - Present)**
University of Kelaniya - Sri Lanka
GPA - 3.29
Dean's List - Academic Year 2019/2020

- Electronics
- Physics
- Pure Mathematics
- Computer Studies

G.C.E. Advanced Level - Science   **(2019)**
CS/Malabe Boys School
2B's & C

G.C.E. Ordinary Level   **(2016)**
Kottawa North Dharmapala Vidyalaya
4A's , 4B's & C

WORK EXPERIENCE

Associate Electronic Engineer
RCS2 Technologies   *(December 2024 – Present)*

- Design, prototype, and test electronic circuits and embedded systems.
- Develop high-efficiency PCB layouts (single/multi-layer) using Altium/Eagle/EasyEda, focusing on cost reduction.
- Collaborate with team to debug hardware/software integration. Evaluate and select ICs, sensors, and power components for performance/cost trade-offs in compact designs.
- Implement wireless communication (BLE, Wi-Fi, LoRa).
- Document design processes, test reports, and technical specifications.

Trainee - Electronic Designer - R & D
RCS2 Technologies   *(May 2024 – December 2024)*

- Designed compact PCBs integrating SIM, SD cards, and amplifiers with noise-filtering circuits for reliable operation.
- Developed embedded firmware (C/C++) for STM32/ESP32/Arduino using FreeRTOS and SDK's.
- Built OCR-based data extraction systems with OpenCV/Tesseract and GUI tools for video stream processing.
- Trained YOLO object detection & audio classification models for automation and deployed HTTP/HTTPS data pipelines (Flask/Waitress).
- Worked with UART/SPI/CAN/I2C communication and JSON-based data handling for IoT devices.

SKILLS

- Python | C++ | C | Java | Platform IO | FreeRTOS | Flask | Waitress
- ESP32 | Arduino | PCB Layout Design | Easy EDA | AutoCAD | SolidWorks
- OpenCV | Tesseract | EasyOCR | YOLO | Microcontroller Optimization
- Project Management | Team Collaboration | Leadership | Problem Solving | Adaptability | Critical Thinking

UNIVERSITY PROJECTS

Centrifuge for separating heterogeneous mixtures | Research Project (2023)

- *Applied principles of physics and electronics to design and construct a centrifuge for efficient separation of heterogeneous mixtures*

Software Development | Mr. Burger (2023)

- *Utilized Java, NetBeans, and SQL to develop a comprehensive software solution for Mr. Burger, incorporating functionalities for order management and inventory tracking.*

Event Management System for University (2023)

- *Implemented event-driven programming techniques and utilized tools like Figma and Visual Studio to design a robust event management system tailored to university needs.*

Web Development | Edusite Lanka (2022)

- *Leveraged HTML, CSS, PHP, JavaScript, and SQL to create a dynamic website for Edusite Lanka, enhancing user experience and facilitating efficient content management.*

PIN-based Door Lock System for Digital Electronics Lab with Access (2023)

- *Designed a secure PIN-based door lock system for the Digital Electronics Lab, employing Arduino, digital electronics principles, and circuit design techniques to ensure controlled access and security.*

To-Do List App (2024)

- *Developed a user-friendly To-Do List application using Kotlin, Android Studio, and SQL, providing users with seamless task management experience on mobile platforms.*

CERTIFICATES

CCENT   (2020)
The Great Lake Holding (Pvt) Ltd

CCNA   (2020)
The Great Lake Holding (Pvt) Ltd

Diploma in Information Technology with E-commerce   (2017)
ESoft Metro Campus

Diploma in English   (2017)
ESoft Metro Campus

Python for Beginners   (2023)
University of Moratuwa

FPGA Embedded System Design Course   (2024)
Arthur C Clarke Institute for modern technologies

EXTRA CURRICULAR ACTIVITIES

- Physics Students' Society   (2022 - Present)
- Electronics Students' Society   (2022 - Present)
- Astronomy and Space Science Association   (2022 - Present)
- AIESEC club - University of Kelaniya   (2021)
- Participated in the Mathematical Olympiad Competition   (2014)
- Swimming | Badminton | Cricket

VOLUNTEER

Cybersify winter project of Incoming Global Volunteer function
AIESEC – University of Kelaniya

Students Awareness and Academic Help Program
ESS - University of Kelaniya

The Project "ANKAYA" – A/L Seminar
PSS - University of Kelaniya

REFERENCES

Professor. L. B. D. R. P. Wijesundera
Head of the Department,
Senior Professor & Chair of Physics,
Department of Physics & Electronics,
Faculty of Science,
University of Kelaniya.
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Dr. J. A. Seneviratne
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