Pravindu Goonetilleke

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Profile

As an enthusiastic and motivated student, I am deeply passionate about electronics, with a specific focus on digital and analog design. I thrive on challenges and am dedicated to understanding how the world works by solving problems creatively. My strong academic background, together with a rich background in music and theatre, has nurtured my ability to think outside the box and approach issues with a fresh perspective.

Looking ahead, I aim to pursue a career in FPGA design, where I can apply my skills to develop innovative, high-performance solutions in embedded systems and digital circuit design.

Education

University of Moratuwa, Undergraduate Bsc. (Hons) Engineering — April 2023 – Present

- Semester 1; GPA 4.0/4.0 (Dean's List) - 14 credits
- Semester 2; GPA 4.0/4.0 (Dean's List) - 23 credits
- Semester 3; GPA 3.96/4.0 (Dean's List) - 21 credits

Royal College Colombo 07 — March 2008 – February 2022

- G.C.E. A/Ls - 3As in Physical Science Stream - 2.7033 Z Score - (12th from Colombo district and 27th from the island)
- G.C.E. O/Ls - 9As

Other Academic Test Scores

Scholastic Aptitude Test (SAT) | The College Board

- CB Student ID: 130099771
- Total Score: 1590 (out of 1600)
- Percentile: 99th

Test of English as a Foreign Language (TOEFL) | ETS

- Test Date: October 30, 2022
- Total Score: 117 (out of 120)

Achievements and Scholarships

- Accepted into **Duke University**, class of 2027, with a 50% scholarship.

Experience

Intern, Vidullanka PLC — October 2023 - December 2023

- Executed PVsyst Simulations for rooftop and ground mounted projects.
- Designed PV Module layouts using Helioscope for rooftop solar project.
- Developed a Return-On-Investment calculator tailored for customers venturing into the solar energy market.
- Researched on floating solar technology and assisted in preparation of documents for an Expression of Interest (EOI) document for the Samanalawewa 200MW Floating Solar Project.
- Conducted extensive research on the technical and financial pre-feasibility of investing in renewable energy across diverse countries, namely Ghana, Madagascar, Gambia, and Mozambique.
- Delivered a comprehensive presentation at the management meeting on the PUCSL hearing, specifically addressing the proposed tariff revision.

Projects

UART Module 2025

- Designed and implemented a UART communication system as a personal project, with separate receiver and transmitter modules, each equipped with dedicated input and output FIFOs for efficient data handling, and state machines to ensure reliable communication.
- Incorporated control and status registers to provide intuitive interaction and detailed communication feedback.
- This was done with the intention of later using it in a logic analyzer that I am working on.
- Tools Used: VHDL, Vivado

Analog Function Generator 2024

- Designed the circuit for an analog function generator, capable of producing square, triangle, sine, pwm, and sawtooth waveforms from 20-20kHz, in partial fulfillment of the requirements for the module EN 2091 Laboratory Practice and Projects
- Tools Used: LTspice, Multisim, Altium Designer

Audio Feedback Based Parking Assistant 2024

- Developed an audio feedback based parking assistant in partial fulfillment of the requirements for the module EN 1190 Engineering Design Project
- Tools Used: Arduino

Automated Attendance System 2022

- Successfully secured a donation of a biometric attendance device for my school and implemented an attendance management system for the Prefects' Council. This system drastically improved efficiency, reducing the attendance tracking process from over a full day to just 20 minutes.
- Tools Used: MB360 by ZKTeco, Microsoft Excel

5 Band Audio Equalizer 2022

- Developed a 5-band audio equalizer from scratch as a personal project, designing passive RC filters to achieve the desired cutoff frequencies and phase shifts with existing component values. The project was fully designed and simulated in LTSpice.
- Tools Used: LTspice

Skills and Interests

Programming Languages and HDL: VHDL, Python, C/C++, Java

EDA: Vivado, Intel Quartus, LTspice, Matlab

Interests: FPGA and Digital Design, Analog Circuit Design, Embedded Systems

Other Activities and Qualifications

- Senior Prefect - Royal College (2022 and 2023)
- Senior Coordinator – Royal College Western Orchestra (2019 and 2020)
- Level 4 Diploma in Performing - Associate of Trinity College London, Speech and Drama (2019)
- 4th Asia Pacific Choir Games organized by Interkultur- Choir Obtained 2 Gold Medals (2017)
- Junior Prefect (2016)
- Bronze Medal in the Sri Lankan Junior Astronomy Olympiad Competition (2016)
- Troop Leader and Patrol Leader 6th Scout Troop (2014, 2015, and 2016)
- First Place, National Level – Orchestra Open A1 Category at the All Island Inter-School Western Music and Dance Competition (2015, 2016, 2017, 2018 and 2019)
- Saxophonist - Royal College Western Orchestra (2015, 2016, 2017, 2018, 2019 and 2020), Colombo Wind Orchestra (2016 to present), National Youth Orchestra (2016, 2017, 2018, 2019), Symphony Orchestra of Sri Lanka (2019) and performed alongside the Worldship Orchestra (2016)
- Bowl Champions – Juvenile Category at the Royal College Basketball Carnival (2013)