Samanyu Okade

Email: samanyuokade@gmail.com
Contact number: +31 6 17507657
Location: Delft, Netherlands
GitHub: https://github.com/Samanyu-007
LinkedIn: https://www.linkedin.com/in/samanyu-okade/
Website: https://someonenew.netlify.app/

EDUCATION

Delft University of Technology
Delft, Netherlands 2023-2025
MSc in Electrical Engineering – Microelectronics track, specialisation in Digital Systems

Vellore Institute of Technology
Vellore, India 2019-2023
B.Tech in Electronics and Communication Engineering

TOP TECHNICAL SKILLS

Python scripting; Verilog HDL; RTL Design; Vivado; git; Digital CMOS Design; CDC awareness; I2C/SPI/UART; Sensor Technology

WORK EXPERIENCE AND INTERNSHIPS

MKB Data Studio
ML engineer for client, Koninklijke van Twist (KVT) ***July 2025- Aug 2025***
- Built a **Python pipeline** to parse the power generator issues and multi-template service-report PDFs into normalised CSVs.
- Delivered a **multilabel learning model** with rule checks to flag incomplete fields.

Lunar Zebro
Comms Subsystem Lead ***Oct 2024- June 2025***
- **Design and critical assessment** of the digital **communications board** (requirements → schematic upgrade → PCB design → radiation-aware parts list → bring-up).
- **Mentor & review** the work of 2 undergraduate engineers, coaching them on **Altium schematics**.

RTips Technologies
Hardware intern ***Oct 2022- May 2023***
- Researched and improved a device that converts **MODBUS and DALI** communication protocols from the base **design of the PCB** to its integration.

Students for the Exploration and Development of Space (SEDS India) ***Aug 2020- Nov 2022***
- As the **Chapter Affairs and Expansions Manager**, I oversaw the **expansion of SEDS as a chapter to 2 more university teams to join our community** of students for Space Development.
- As the **Executive Director** in the following term, I successfully led and organised a cross-functional team of 8 SEDS India Staff members to improve efficiency and communication.
- **Ideated and mentored projects**, including CubeSats, and participated in competitions such as the International Rover Competition and International Rover Design Competition, to support all 14 sub-chapters as needed.

The Institution of Engineering and Technology (IET-VIT Vellore)
Hardware Head ***Dec 2020- Dec 2021***
- **Managed, taught, and guided 12** freshers and sophomores in learning hardware skills in **embedded systems, fundamentals of communication, CMOS, and digital designs**.
- **Mentored three teams to victory** in hardware tracks and open categories **in hackathons,** Equinox, and Hack4cause.

ACADEMIC PROJECTS

TIENOS: A Tool for Intensive Exploration of Neuromorphic Workloads for Outer Space ***Jan 2024 – Aug 2025***

- **Master's thesis** where I designed a tool to map **training-layer protections** and **tinyODIN hardening targets**, via intensive sweeps to **improve robustness** with zero to **minimal overhead** (vs 3x logic replication in TMR).
- The tool produced upto **15% improved accuracy** in realistic **bit-flip noise conditions in outer space** with **minimal changes** to a simplistic resource-constrained CubeSat system, additionally producing suggestions for further hardening.

FPGA-based (hardware) decision-making for efficient satellite orientation and propulsion ***Oct 2022 – Apr 2023***
(Published in IEEE Xplore in June 2023)

- **Undergrad thesis** where I devised a method for **rockets and propulsion engines** to orient and **align** the solar panels and themselves using **FPGAs** to make the **most efficient positioning decisions** using sensor-based information.

The RTA [Robotic Temperature Analyser] ***Mar 2022 – May 2022***

- Created a prototype of a small **robot that moves along queues in crowded indoor areas** to ensure a personal space between two people, while also **reading surrounding internal temperature and humidity conditions** for hygienic reasons, including but not limited to COVID-19.

A Robotic Solution for Internal Imperfection Detection in Industrial Machinery ***Sept 2021 – Nov 2021***
(Published in the AIP Conference Proceedings in March 2024)

- Prototyped "SensoRobot", a small, mobile robot with flame, DHT-11, MO-26, and ultrasonic sensors to **detect anomalies and conditions within tight industrial equipment spaces**.
- The distance sensor-mounted servo motor automates steering within tight industrial machine spaces.

OTHER TECHNICAL SKILLS

TCL; PCB designing; Cadence Genus and Innovus; MATLAB; Embedded Systems; VHDL; Assembly Level Language; Linux; Internet of Things; RISC-V familiarity; Robotics.

CERTIFICATIONS

- Bosch Spring School on AI in industry in 2025.
- Provisional discovery of the Main Belt asteroid 2021EM17.
- CMOS Digital VLSI Design-course certification offered by IIT Roorkee. (NPTEL)
- Linear Circuits 2:AC Analysis-course certification offered by Georgia Institute of Technology. (Coursera)
- Introduction to Electronics-course certification offered by Georgia Institute of Technology. (Coursera)
- Introduction and Programming with IoT Boards-course certification offered by POSTECH. (Coursera)
- National Science Olympiad (NSO) Zonal Gold medalist in 2015.
- Academic proficiency awards in 2013, 2015, and 2017.

CAMPUS & COMMUNITY INVOLVEMENT

- Core Committee member at the Institution of Engineering and Technology (IET) 2019-2023
- Alpha team member of VIT Dance club 2020-2023
- Flautist and musician in VIT Community Radio 2019-2023
- VIT Swim team 2019-2023

KEY SKILLS

Leadership; Public-speaking; Effective Communication; Team-management; Writing; Creative thinking; Adaptability

EXTRA-CURRICULARS

- Participated in and won art and painting competitions, both national and International (Japan, India, and Malaysia).
- Poom Belt in Taekwondo.
- Participated in and won competitions of various levels as a Flautist, keyboardist, Vocalist, and Dancer.