Thar Htet Nyan

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October 31, 2003 | Myanmar (Burmese) | Male | Seoul, South Korea

INTRODUCTION

A third-year Biomedical Engineering student at Soonchunhyang University and Global Korea Scholarship awardee with a strong focus on embedded systems, medical device innovation, and neuromodulation technologies. Passionate about advancing healthcare through microcontroller-driven solutions and biomedical research.

EDUCATION

Soonchunhyang University, Asan, South Korea March 2023 - Present
Bachelor's in Biomedical Engineering, 3rd year
GPA: 4.43/4.5 (Ranked 1st, 4x Dean's List Awardee)

Relevant Courses: Electrical & Electronic Circuit Design (w/ Lab); Digital Logic Circuit (w/ Lab); Medical Microprocessor; Medical Embedded Programming; Biosignal Analysis; Data Analysis; Smart Healthcare; Intro to Biomedical Engineering; Human Physiology; Medical & Mechanical Engineering Experiment; Intro to Software; Mechanical Drawing & CAD; Mechanical Machining & Manufacturing; Solid Mechanics; Fluid Mechanics; Statics; Thermodynamics; Intro to Mechanical Engineering

SKILLS

Language: Burmese *(Native)*, English *(TOEIC 855/990)*, Korean *(TOPIK 6/6, TOPIK Speaking 5/6)*
Software & Tools: Microsoft Office, Autodesk Inventor, OrCAD, LTspice, LEGO® MINDSTORMS®
Programming Languages: Python (Lego Robotics & Data Analysis), C++ (Arduino), C (STM32CubeIDE, Atmega128, Embedded)

EXPERIENCE

Undergraduate Researcher, *Innovative Medical Device Lab* March 2025 – Present

- Presented research poster "Implantable Tibial Nerve Stimulation for Refractory Overactive Bladder" at the 2025 Spring Conference of the Korean Society of Medical and Biological Engineering (KOSOMBE) in Jeju.
- Authored a review article titled "A Comprehensive Review of Implantable Tibial Nerve Stimulation Devices for Overactive Bladder", currently under peer review for journal publication.

Research Intern, *Innovative Medical Device Lab* Jan 2025 – Feb 2025

- Conduct research on neuromodulation techniques for overactive bladder (OAB) treatment, focusing on percutaneous tibial nerve stimulation (PTNS) and sacral nerve stimulation (SNS).
- Assist in experimental design, data acquisition, and analysis for microcontroller-driven medical devices.
- Document research findings, compile technical reports, and present insights to faculty and research teams.

Library Assistant, *SCH University* Aug 2024 – Aug 2025

- Led library orientation tours for new international students, providing clear guidance on available resources, research databases, and academic tools.
- Delivered informative and engaging presentations in English, ensuring students effectively utilized the library's services.
- Developed strong cross-cultural communication and public speaking skills by assisting a diverse student community.

PROJECTS

Fingerprint-Contact ECG Measurement System, *(Electrical & Electronic Circuit Design, SCH University)*

- Developed a compact ECG circuit board enabling biosignal acquisition via thumb and finger contact, fully customized to iPhone dimensions for portability and integration.
- Completed the entire hardware development cycle from circuit design, PSpice simulation, footprint creation, PCB layout, soldering, to debugging using the INA126 for low-noise biopotential amplification.

High Performance Sports Wheelchair Design, *(Mechanical Drawing & CAD, SCH University)*

- Designed an innovative, lightweight sports wheelchair in Autodesk Inventor, optimizing maneuverability, durability, and ergonomic seating with customizable components inspired by traditional Japanese rickshaws to enhance user comfort and efficiency.
- Demonstrated expertise in assistive technology, biomedical engineering, and mechanical CAD design.

Enhanced Wheelchair Design, *(Mechanical Drawing & CAD, SCH University)*

- Engineered a feature-rich wheelchair with a MagSafe phone holder, cup holder, storage box, anti-tippers, reclining backrest, ergonomic push grips, and an advanced braking system, completing the entire design in just 5 days and 3D-printing a scaled prototype to showcase rapid prototyping skills.
- Applied human-centered design principles to enhance safety, accessibility, and user experience.

LEGO Robotics Color Sorter, *(Introduction to Software, SCH University)*

- Developed a high-speed Python-based sorting mechanism capable of sorting 16 blocks in 20 seconds, integrating a motorized push system, rotational rail, push-button sensor for speed control, and instant color detection sensor for optimal performance.
- Showcased expertise in robotics, embedded systems, and sensor-driven automation.

Scholarships

Global Korea Scholarship. National winner, full funding for undergraduate studies — Mar 2022– Mar 2027
Ministry of Education, Republic of Korea

Korean Language Excellence Scholarship. ₩1.4 million for achieving TOPIK 6 — Mar 2023
SCH University

Burmese American Community Institute Scholarship. Full funding for fall semester at UUM — Sep 2021
BACI, theUniversity of Union of Myanmar- Global Campus (UUM)

Awards & Honors

DEAN'S LIST AWARD (Winter 2024) — Feb 2025
SCH University, College of Medical Sciences

DEAN'S LIST AWARD (Summer 2024) — Aug 2024
SCH University, College of Medical Sciences

DEAN'S LIST AWARD (Winter 2023) — Feb 2024
SCH University, College of Medical Sciences

DEAN'S LIST AWARD (Summer 2023) — Aug 2023
SCH University, College of Medical Sciences

Outstanding Student Award — Jan 2023
Dongseo University, Korean Language Institute