

Michael Leander P. Roque

Unit 916B Sorrel Residences, Sociego St., Barangay 586, Sampaloc, Manila 1008

mleanderroque@gmail.com | (+63) 995 072 3131

EDUCATION:

De La Salle University

M.S. in Manufacturing Engineering

Scholarships: Department of Science and Technology - Science Education Institute, Engineering Research and Development for Technology (DOST-SEI ERDT) Awardee

Manila, Philippines

2022 - 2025

B.S. in Manufacturing Engineering and Management with Specialization in Mechatronics and Robotics Engineering

Magna Cum Laude Standing

2019 - 2025

San Beda University

SHS Diploma - Science, Technology, Engineering, and Mathematics (STEM) Strand

Awards: Gold Medal in Capstone Research, Gold Medal in Extra-Curriculars

Manila, Philippines

2017 - 2019

The Philippines School, Abu Dhabi

Junior High School Completion Certificate

Awards: Honorable Mention

Abu Dhabi, UAE

2017

EXPERIENCE:

Mondelēz Philippines

Maintenance Intern

Parañaque, Philippines

2025

- Created and processed detailed work orders for preventive and corrective maintenance, ensuring accurate integration into the company's SAP database system to support streamlined maintenance planning and execution.
- Assisted maintenance technicians and planners in organizing planned and condition-based maintenance activities, improving equipment uptime and maintenance responsiveness.
- Developed and standardized maintenance procedures aligned with best practices to enhance equipment reliability and operational efficiency.
- Contributed to the successful attainment of IL6S Phase 2 by supporting Focused Improvement (FI) and Preventive Maintenance (PM) pillars as part of the Sucat plant's World Class Manufacturing (WCM) initiatives.

The IEEE International Conference on Robotics and Automation (ICRA 2024)

Student Volunteer

Yokohama, Japan

2024

- Ensured that authors were properly briefed on presentation procedures and technical guidelines.
- Provided assistance to authors during their presentations, both virtually and on-site.
- Contributed to the overall success of the event by offering logistical and technical support as needed.

Evelyn D. Ang - Institute of Biomedical Engineering and Health Technologies (EDA-IBEHT)

Student Research Assistant

Manila, Philippines

2022 - 2024

- Successfully coordinated multiple research tasks by prioritizing effectively and achieving project objectives.
- Worked collaboratively with a diverse team of researchers, providing input that helped refine project goals and methodologies.
- Created detailed reports to summarize research findings, improving communication among team members.
- Strengthened verbal and written communication skills by preparing research reports and presentations.

DLSU Brazilian Jiu-Jitsu & Grappling Organization (BJJ GO)

Public Relations Officer

Manila, Philippines

2024 - 2025

- Efficiently developed publication materials and captions for the use of the organization's social media.
- Exhibited strong interpersonal skills by taking the initiative in tasks before being officially assigned and offering different perspectives in certain situations.

Michael Leander P. Roque

GCOE Graduate Student Council

Manila, Philippines

Department of Manufacturing Engineering and Management Course Representative

2023

- Coordinated with the President of the Graduate Student Council on relaying information related to enrollment or opportunities.
- Communicated with the Graduate Course Coordinator on concerns of batchmates regarding enrolment or other circumstances.

DLSU Society of Young Engineers Towards Achieving Excellence (SYNTAX)

Manila, Philippines

Assistant Vice President for Learning Resources

2022 - 2023

- Facilitated team-building activities that helped strengthen the bonds of officers under the Learning Resources Committee.
- Collaborated with different groups of people in the Learning Resources committee to create reviewers for the use of engineering students inside and outside De La Salle University.
- Developed a tracker that recorded the number of people who filled up the forms to download reviewers for every subject available.
- Demonstrated strong leadership skills by strategically delegating tasks and responsibilities within the committee, facilitating smooth workflow, and ensuring timely project completion.
- Coordinated with the executive board to create an efficient and effective organization, maintaining a safe space for officers and executive board members alike.

Associate

2021 - 2022, 2023 - 2024

- Coordinated with other committees to provide extra manpower, developing different skills by helping different committees in the process.
- Collaborated with different people from different committees, demonstrating the ability to work with others.

Human Resources Officer

2019-2021

- Effectively guided different people in the Gokongwei College of Engineering with their academics, further developing interpersonal skills in the process.
- Developed questions that were used in various mathematics competitions.
- Assisted various projects by offering manpower and initiative.

Society of Manufacturing Engineers

Manila, Philippines

Academic Services Officer

2020 - 2021

- Coordinated with the head of the Academic Services to assist the students of the Department of Manufacturing Engineering with their academics.
- Effectively guided a batch of students by providing and teaching a group tutorial for a difficult course.

74th ENG

Manila, Philippines

Manufacturing Engineering Course Representative

2019 - 2021

- Coordinated with the Batch Government on methods to help fellow students with their problems, may it be academic or personal.
- Collaborated with the Society of Manufacturing Engineers on ways to make enrollment more effective and efficient.
- Cooperated with the batch representative on seminars and activities that were able to help manufacturing engineering students in their academics.

PROJECTS:

Design And Analysis of Hip and Knee Mechanisms for Natural Lower Limb Movement Replication

2024

- Aims to create hip and knee mechanisms for a smart hospital rehabilitation bed that will replicate the natural lower limb movement of a human leg.
- Currently in the final stages of defense and development.

-
2025

Comparative Material Analysis of Exoskeletons for Durability Testing

2024

- Evaluated three different materials in 6 distinct categories, namely: directional deformation, total deformation, equivalent stress, equivalent strain, principal stress, and principal strain. Results were presented in Teknolunas 2024, held in Cebu, Philippines.

Michael Leander P. Roque

- Awarded with the Best Paper and Best Presenter at the conference mentioned above.

Electroencephalography Signal Classification for Wheelchair Gradient Speed Control Using Machine Learning 2024

- Performed an analysis of machine learning approaches for signal classification for electroencephalography signal data to classify different levels of speed for automatic gradient speed control for a wheelchair.
- Results were presented and published at the 15th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management (HNICEM) in Coron, Palawan, Philippines.

Analytical Hierarchy Process-Based Material Selection for Fiber Reinforcement of Polylactic Acid 3D Printing Biofilament 2023

- Utilized Analytic Hierarchy Process to determine the best local fiber for reinforcing PLA 3D printing biofilaments in the Philippines.
- Results were presented and published at the 15th International Conference on Humanoid, Nanotechnology, Information Technology, Communication and Control, Environment, and Management (HNICEM) in Coron, Palawan, Philippines.

Dissolved Oxygen Management in Enhancing a First-order Closed-Loop Shrimp Aquaculture System Using an Adaptive PID and PI-based Controller 2023

- Utilized and proposed the use of adaptive PID and PI-based controllers to optimize dissolved oxygen levels in shrimp farms, improving shrimp health, growth, and profitability for Filipino shrimp farmers.
- Results were presented and published at the 2023 8th International Conference on Business and Industrial Research (ICBIR) in Bangkok, Thailand.

AI Vision-based Software for Single Camera Systems: Mapping Human Heat Density 2022

- Devised a human detection and counting software with heat map functionality for monitoring human density by testing multiple convolutional neural networks (CNN), including: YOLOv5-crowd or YOLOv5m, YOLOv5s, R50-FPN 3x, and SSD.
- Results were presented and published at the 2024 9th International Conference on Mechatronics Engineering (ICOM) in Kuala Lumpur, Malaysia.

The Feasibility Of Using Automatic Vehicle Location On Public Utility Buses In Metro Manila As A Factor For Traffic Play 2019

- Developed a User Interface for a mobile application that tracks buses around Metro Manila. Presented and published during the 2019 San Beda University - Senior High School Research Congress.
- Awarded with Best Research in the Information Technology Division of the Congress.

SKILLS:

- Highly proficient in Microsoft Office Suite.
- Highly skilled and knowledgeable in conducting CAD, CAM, and CAE simulations using Autodesk Fusion 360, ANSYS, and CATIA.
- Experienced in programming languages, including Python, C, and MATLAB.
- Experienced in prototyping with electronic and microcontroller/microprocessor platforms like Arduino, Raspberry Pi, and PLCs.
- Well-versed in manufacturing techniques, including 3D printing, CNC machining, production management, product design, and lean manufacturing.
- Strong critical and analytical thinker
- Effective in working within and leading diverse teams.
- Adaptable and responsive in dynamic environments.
- Excellent time management skills.

CERTIFICATION AND SEMINARS:

Six Sigma Yellow Belt Certification eLearning ASEAN An introductory certification that provides individuals with a foundational understanding of Six Sigma principles and tools, focusing on reducing variation and improving quality through structured problem-solving.	2025
Lean Six Sigma White Belt Certification SIX SIGMA PH An entry-level certification that introduces individuals to the basic principles of Lean (eliminating waste) and Six Sigma (reducing variation) as a foundation for process improvement.	2025
ProLoCo: Fundamentals of Programmable Logic Controllers Society of Manufacturing Engineers A workshop dedicated to exploring the industrial applications of Programmable Logic Controllers (PLCs), covering key concepts, hands-on programming, and real-world use cases in automation and control systems.	2021
DesignENG2: CyberErgonomics Society of Manufacturing Engineers A seminar highlighting the benefits of ergonomics in product design, emphasizing how user-centered design enhances comfort, safety, and overall product usability.	2021
LEAN WITH US: A LEAN MANUFACTURING WEBINAR Society of Manufacturing Engineers An online seminar covering lean manufacturing principles and their application across various industries, showcasing strategies for waste reduction, efficiency improvement, and process optimization.	2021
LevelENG UP DLSU SYNTAX An online seminar that focuses on the experiences and life advice of Board Top Notchers from various engineering fields.	2021
SME AXIS Society of Manufacturing Engineers A two-day webinar that showcases innovations from various fields, including artificial intelligence, medical devices, and robotics.	
Virtual Kapihan on Stress Management x DLSU 74th ENG In Touch Community Services Inc. DLSU 74th ENG An online assembly that showcases different methods of dealing with stress and burnout	2020

REFERENCES AVAILABLE UPON REQUEST
