

DUY-QUANG NGUYEN

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PROFILE

BSc Mechanical Engineering at VinUniversity, MSc Engineering Design & Innovation at NUS. Combine engineering thinking and user-centered design to solve problems at the intersection of **technology and humanity**. Thrive best in fast-paced & multi-disciplinary environment.

PROJECTS

My engineering design portfolio: duyquangnguyen.com

Capstone | *Development of an EMG-Driven Wearable Knee Exoskeleton for Assistive Rehabilitation* Oct. 2024 – Jun. 2025

- Developed a wearable device with **Variable Stiffness Actuator** and **AI application** for knee rehabilitation, controlled by **real-time EMG signal**.
- Use tools like **SolidWorks, MATLAB, ANSYS, Dynamic Calculations** to design the device.
- Create prototype using **Rapid Prototyping Methods** like **lazer-cutting & 3D printing**. Apply **tolerance tests & torque tests** for design validation & improvements.
- Lead Mechanical Designer in a cross-disciplinary team.

Robotics Course Project | *Teleoperation utilizing Quest 3 Hand-tracking Feature for Controlling a Robot Hand* May. – Jun. 2025

- Developed a systems to let user control a 5-finger robot hands using **Meta Quest 3**.
- Use **Unity 3D and XR Hand API** to capture and calculate fingers' angles, stream data to laptop. Use **Python** for a program to record, store and stream data to **Arduino Uno** for robot control.

EXPERIENCES

SMC Corporation Vietnam - Sale Branch & Factory

Feb. – Jul. 2023

Student Manufacturing Intern

Vietnam

- Familiarized with pneumatic systems, company's product and tasks in the CNC department and sale branch.
- Directly participated in the manufacturing and assembly process for 3 types of pneumatic cylinders.
- Analyzed products' blueprint, training kit and recreated **3D models** with **Autodesk Inventor** and **Fusion 360**.
- Identified and researched a departmental issue, and designed a concept solution using **Autodesk Inventor**.

ARIS Start-up Project - VinUniversity Entrepreneurship Lab

Oct. 2022 – 2024

Co-founder/Technical Artist

Hanoi, Vietnam

- Responsible for creating AR products with **Unity 3D, SparkAR, 8th Wall**.
- Supported asset creation with **Blender 3D, Mixamo**.
- Collaborated in a cross-disciplinary team.

EDUCATION

National University of Singapore

Singapore

Master of Science in Engineering Design and Innovation

Aug. 2025 - May. 2026

VinUniversity

Hanoi, Vietnam

Bachelor of Science in Mechanical Engineering, Concentration in Mechatronics

Oct. 2020 – Jun. 2025

- 90% Merit-based Scholarship.
- CGPA: 3.23/4.0.
- Concentration Courses: Embedded Systems, Sensors and Actuators, Robotics and Automation.

Pohang University of Science and Technology

Pohang, South Korea

Exchange student

Aug. 2023 – Jun. 2024

- POSCO's Global Young Leaders Scholarship Program.
- Relevant Courses: Interaction Design Studio, Game Design Studio.

CERTIFICATION

Google UX Design Certificate Program

Coursera

Online Professional Certification Program

Jun. 2024 – Jan. 2025

- Completed seven online courses focusing on UX design fundamentals and **Figma**, including two UX design projects.

TECHNICAL SKILLS

CAD: SolidWorks, Autodesk Inventor, Autodesk Fusion 360
Analysis: MATLAB, ANSYS Mechanical
Programming: Basic proficiency in C++, C#, Python
Development: Arduino, Unity 3D
Creative & Design: Figma, Blender, DaVinci Resolve
Languages: Vietnamese (Native), English (Professional Fluency), Mandarin (Beginner)

SOFT SKILLS

Design Thinking	System Thinking	Rapid Prototyping	Cross-Disciplinary Integration
Communication	Adaptation	Problem Solving	Critical Thinking