Vo Anh Quan

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Summary

As a dedicated Mechanical Engineer, I specialize in designing and controlling robotic systems, with a focus on integrating soft robotics and bionic prosthetics. My ambition is to develop advanced, user-friendly technologies, such as bionic hands and intuitive UI/UX software, that provide accessible solutions for individuals with physical disabilities. By exploring the potential of soft robotics, I aim to create more adaptive and flexible devices that closely mimic human motion, enhancing both functionality and comfort. I seek to deepen my expertise in Japan, a global leader in robotics and technology, where I plan to contribute to the development of innovative engineering solutions that bridge the gap between robotics and human needs.

Education

BS **Hanoi University of Science and Technology**, Mechanical Engineering — Sept. 2021 to Now

- CPA: 3.49/4.0
- **Coursework:** Mechanical Engineering, GD&T, Technical Drawing, Mechanics of Material, Thermodynamics, Fluid Mechanics, Control Systems.

Reserach Experience

Lab **307labs (Opto-Mechatronics Laboratory)**, Undergraduate Research Assistant. — Feb. 2023 to Now

- Worked as a vice-head of research group in laboratorry, leading a team of 5 students in developing a novel bionic hand.
- Conducted research on sensor, soft actuation and robotics, focusing on integrating optical sensor with soft robots design.
- Published findings in university conference and presented at academic.

Engineering Project

Design Bionic Arm, Roles of design arm — HN, VN, Feb. 2023 to Dec. 2023

- Research different types of actuators to control the elbow and writst movements.
- Using CAD sofware, such as Onshape and Fusion 360, to improve open-source bionic hand called "Reachy".
- Onshape allowed me to collaborate with team online, from any location with internet access.
- Fusion 360 provided tools for generative design, which I used to create a bionic arm that is both lightweight and strong.

Shape Memory Alloys - Actuator, Roles of Simulation and Control — HN, VN, Feb. 2024 to On-going

- Used COMSOL Multiphysics software to simulate a helical spring made from shape memory alloy (SMA) to find the right parameters for producing enough force and movement.
- Controlled the SMA actuator using a microcontroller (Arduino) and sensors to manage voltage and current.
- Developed a testing system to collect data from the SMA spring, which was fabricated in-house.

Awards and Honors

Academic Achievement Scholarship - Fall 2021, Spring 2022, Spring 2023, Fall 2023, Spring 2023

Nitori International Scholarship Foundation One of 20 talent students selected by Nitori in 2023.

Second Prize at HUST Student Scientific Research Conference in 2024

Language Proficiancy

English: Fluent in reading, writing, and verbal communication, with extensive experience in academic and professional settings

Skills

Programming **C, C++, Python**, applied in robotics and automation projects.

LaTeX for professional technical documentation and reports.

CAD software (Onshape, Fusion 360) for mechanical design and simulation.

Strong analytical and problem-solving skills for engineering challenges.

Effective communicator, experienced in multicultural team collaboration..

Referee

PhD. Nguyen Thi Kim Cuc