

# Quang Nhat Nguyen Le

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## Experience

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### Robert Bosch Campus for Research and Advanced Engineering

Renningen, Germany

INTERNSHIP AND MASTER'S THESIS

Oct. 2022 - Sep. 2023

- Develop an end-to-end High Definition Map Construction Approach for Autonomous Driving Vehicles with Deep Learning approaches
- Develop a real-time High Definition Map Construction pipeline based on ROS framework
- Leverage Transformer-based Neural Networks to construct High Definition Maps using camera and LiDAR data
- Related topics: Transformer-based Neural Networks, ROS, Computer Vision, Deep Learning, LiDAR, real-time HD Map Construction, C++/Python, Sensor Data Processing

### Robotics Lab, Rhine-Waal University of Applied Science

Kleve, Germany

RESEARCH ASSISTANT

Sep. 2019 - Apr. 2021

- Develop Autonomous Small-scaled Self-driving Vehicles with low-power embedded systems.
- Deploy SLAM algorithms on Mobile Robotics Platforms
- Develop real-time solutions for Artificial Intelligence applications on edge devices
- Tutor the course "Introduction to Machine Learning"
- Tutor the course "Advanced Computer Aided-Design"
- Related topics: ROS/ROS2, SLAM, Computer Vision, Deep Learning, PyTorch, TensorFlow, TensorRT, OpenCV, Nvidia Jetson, Raspberry Pi, DC Motor Controller Mobile Robotics

### Robert Bosch Engineering and Business Solutions Limited

Ho Chi Minh City, Vietnam

TECHNICAL ANALYST FOR FOREIGN TRADE

Oct. 2017 - Mar. 2018

- Build up Master data for Foreign Trade share service included Harmonize system code, preferential determination, and export control for all products of Bosch worldwide
- Analyze Bill of Material of Bosch products for preferential calculation

### Samsung Electronic Ho Chi Minh CE Complex

Ho Chi Minh City, Vietnam

DIGITAL APPLIANCES ENGINEER- SENIOR STAFF

June. 2016 - Sep. 2017

- Design and develop new models of Samsung refrigerator for mass production
- Initiate and provides technical direction to enhance production methods, improve quality and reduce production costs
- Develop methods, programs and plans to predict, track, and report production costs during design development

## Education

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### RWTH Aachen University

Aachen, Germany

M.Sc IN ROBOTICS SYSTEM ENGINEERING

Oct. 2021 - Sept.2023

- GPA: 1.9/1

### Rhine-Waal University of Applied Sciences

Kleve, Germany

M.Sc IN BIONICS. FOCUS: ARTIFICIAL INTELLIGENCE IN ROBOTICS

Mar. 2018 - Mar. 2021

- GPA: 1.7/1
- Master's Thesis: Design and Development of IAOR - an Intelligent Autonomous Omni-directional Robot
- Association of German Engineers (VDI)'s award for excellent Master's Thesis

### Ho Chi Minh City University of Technology and Education

Ho Chi Minh City, Vietnam

B.Sc IN MECHANICAL ENGINEERING

Sep. 2012 - Aug. 2016

- GPA: 8.1/10

## Skills

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<b>Programming</b>	Python, C++/C, MATLAB, Java, HTML/CSS/Js
<b>Systems</b>	Linux, Git, Docker
<b>Robotics</b>	ROS2/ROS, Embedded Systems, Localization, SLAM
<b>AI Frameworks</b>	MMDetection, Pytorch, Tensorflow, Scikit-learn, TensorRT, TFLite
<b>CAD</b>	Siemens NX, Solidworks, Inventor, AutoCad
<b>Languages</b>	English (Fluent), German (Basic), Vietnamese (Native Language)
<b>Office tools</b>	Latex, Excel, Word, PowerPoint
<b>Hobbies</b>	Basketball, Guitar, Running

## Projects

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### Rhine-Waal University of Applied Sciences

*Kleve, Germany*

TEAM CAPTAIN

*Mar. 2019 - May. 2021*

- Design and Development of IAOCR - an Intelligent Autonomous Omni-directional Climbing Robot.
- Small-scaled Self-driving Vehicles competition: Our goal is to develop small-scale automated vehicles which would compete in JRC AUTOTRAC 2020 - an autonomous vehicle traffic competition hosted by European Science Hub.

### Ho Chi Minh City University of Technology and Education

*Ho Chi Minh City, Vietnam*

TEAM CAPTAIN

*Apr. 2015 - Jul. 2016*

- Capstone Project: Design, Developing and Manufacturing 5 Axis CNC Milling Machine.
- Research Project: Development of an Ion-exchange Polymer Metal Composites bending actuator for robotic and medical-related applications.

## Honors & Awards

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2021	<b>Association of German Engineers's award for excellent Master's Thesis,</b>	<i>Düsseldorf, Germany</i>
2021	<b>Vingroup Science and Technology Scholarship Program for Overseas Study for Master's and Doctoral Degrees,</b>	<i>Hanoi, Vietnam</i>
2021	<b>3rd place at JRC AUTOTRAC 2020: a small-scale automated vehicles competition hosted by EU Science Hub,</b>	<i>Ispira, Italy</i>
2016	<b>Odon Vallet scholarship for excellent students in Vietnam,</b>	<i>Ho Chi Minh City, Vietnam</i>
2015	<b>Excellent oral presentation at ICMAS 2015 conference, April 13th-14th, Paris, France,</b>	<i>Paris, France</i>
2014	<b>Sunflower Mission Engineering and Technology Scholarship 2014,</b>	<i>Ho Chi Minh City, Vietnam</i>

## Publication

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2015	<b>Quang Nhat Nguyen Le</b> , and Nguyen Truong Thinh: "Development of the bending actuator with Nafion-Pt IPMC tube". Advanced Materials Research. Vol. 1119. Trans Tech Publications, 2015.	<i>Paris, France</i>
2020	<b>Quang Nhat Nguyen Le</b> , Abir Bhattacharyya, Mamen Chembakasseril and Ronny Hartanto: "Real-time Sign Detection and Recognition for Self-driving Mini Rovers based on Template Matching and Hierarchical Decision Structure". Proceedings of the 12th International Conference on Agents and Artificial Intelligence. Vol. 1. SciTePress, 2020.	<i>Valletta, Malta</i>