

# NGUYỄN TRÍ THANH

AI Engineer & Project Leader

         

## OBJECTIVE

I am driven to amalgamate my expertise in Artificial Intelligence with the fields of Automation and Control, specifically within the domain of Mechatronics, which constitutes my primary area of focus. Through self-directed learning and active participation in AI initiatives at my university's IUD Lab, I have nurtured a profound interest in amalgamating these realms to establish what I term an "Intelligence Control System." I firmly advocate that by harnessing AI within the Automation and Control sectors, industries can unlock unprecedented prospects for high-precision and high-speed production. This vision has long been a personal aspiration of mine, and I am wholeheartedly dedicated to exerting my utmost endeavor to manifest it into reality.

## EDUCATION

**Bachelor\_Ho Chi Minh City University of Technology**

Oct 2020 - Present

Major: Mechatronics

GPA: 7.92/10.0 (3.3/4.0)

## WORK EXPERIENCE

**IUD Lab - Ho Chi Minh University of Technology**

Oct 2022 - Present

Artificial Intelligence Engineer & Project Leader

Main responsibilities:

- Hand-on projects about Machine Learning and Artificial Intelligence for experiences and knowledges for future larger projects.
- Research about Computer Vision, Machine Learning algorithms and Deep Learning architectures to build and implement network in project modules with real-time requirement.
- Research on automation systems and robotics to connect software and hardware together for better operations.
- Leader of automated plastic waste sorting system project for a well-known plastic recycling company in Vietnam (5 team members).

Recognition and Gains:

- Machine Learning, Deep Learning, Computer Vision in real-time application.
- Robotics, Automation Control System, Intelligence Control System.
- Project Management.

**Beckhoff Automation Vietnam (Germany Automation Equipment Supplier Branch in Vietnam, main global customers: Tesla, Airbus, Intel)**

June 2022 - Aug 2022

Machine Learning Intern

Main responsibilities:

- Support country manager to apply Machine Learning in Automation tasks via Beckhoff TwinCAT 3, Open Neural Network Exchange (ONNX), PLC API and Structure Text for basic demo and further applications in partners' tasks.
- Help other engineers to meet partner's demand by making documentations for further training and applying in companies.

Recognition and Gains:

- My most valued success: Deploying Machine Learning models such as MLP, k-Means, etc into TwinCAT 3 for further application tasks such as: Optimize machine's energy, Classification of damaged or undamaged foods, etc of company and partners.
- Be able to give instructions for others in the company, give them the ability to apply when company's partners demand.

Computer Vision Intern

Main responsibilities:

- Hand-on projects on Computer Vision field: Detecting cracks on tires.
- Research about Computer Vision network for adapting efficiently with projects.
- Labeling real data for training network with CVAT.

Recognition and Gains:

- Deep Learning, Computer Vision, CVAT.

## PROJECTS

IUD Lab - Ho Chi Minh City University of Technology

Jan 2023 - Now

Plastic Waste Sorting System

- Apply Deep Learning architecture for plastic bottle trash detection.
- Design and build the automatic system for this task.
- Lead and manage team for better performance.

Coursera

July 2022 - Aug 2022

SpaceX Dataset Analysis

- Analyze about SpaceX datasets provided by IBM in commercial space age.
- Build dashboard and visualize charts to get insights.
- Apply Machine Learning models for regression.
- GitHub link:

## CERTIFICATIONS

"Fine-tuning DETR: Toward Holistic Process in Plastic Waste Sorting System" paper in Waste Management journal (DOI: 

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2024

Deep Learning Specialization from 

issued by Coursera

2022

Python3 Programming Specialization, issued by Coursera

2022

IBM Data Science Professional Certificate from IBM Skill Network, issued by Coursera

2022

TensorFlow Developer Professional Certificate, issued by Coursera

2022

IELTS 6.5 issued by IDP Ho Chi Minh

2020

## HONORS & AWARDS

Marvell Vietnam Excellence Scholarship 2024 awarded by Marvell Vietnam

2023-2024

"HBKK" Scholarship awarded by Ho Chi Minh City University of Technology

2022-2023

BKA Scholarship awarded by BKA and Mechanical Department - Ho Chi Minh City University of Technology

2022-2023

## SKILLS

Language	Vietnamese, English
Microsoft Office	Word, Excel, Powerpoint
Programming Languages	Python, SQL, R, C, Matlab
AI Frameworks	TensorFlow, PyTorch (with CUDA), Scikit-Learn
Programming IDE	Visual Studio Code, Pycharm, Google Colaboratory

## REFERENCES

Associate Professors PhD. Luu Thanh Tung, Head of Department of Construction Machinery and Handling Equipment, Faculty of Mechanical Engineering, Ho Chi Minh City University of Technology, Vietnam National University, [REDACTED]	Doan Thi Sen, My Mentor from BK Mentoring, [REDACTED]
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## INTERESTS

I like Data, Artificial Intelligence and Automation. I want to combine them together and create totally smart factory for every aspect. My hobbies are soccer, chess and strategic games.