



# NGUYEN THANH DAT - 원성민

SOFTWARE ENGINEER

Date of birth: July 10, 1996

Nationality: Vietnamese

☎ (+82) 10-4409-6699 | ✉ ntdgodev@gmail.com | 🏠 ntdgo.dev

## Education

### M.S. in Electronics Engineering

MYONGJI UNIVERSITY

- GPA: 4.25/4.5

Yongin, Rep. of Korea

Mar. 2019 - Aug. 2021

### B.E. in Electrical Engineering

HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY AND EDUCATION (HCMUTE)

- GPA: 7.39/10

Ho Chi Minh, Vietnam

Aug. 2014 - Sep. 2018

## Language Skills

**Vietnamese** Native level

**English** Business level

**Korean** Daily conversation level

## Technical Skills

**Computer Programming** Python, C#, C++, TypeScript, Verilog

**Database Management** MSSQL, PostgreSQL, SQLite,...

**Software and Tools** Visual Studio, Visual Studio Code, Pycharm, MATLAB, Figma

**Version Control** Git, GitHub, SVN

**Academic work** LaTeX, Microsoft Office

## Working Experiences

### OCST .Co, Ltd.

SOFTWARE ENGINEER

- Planning software architecture and functions for projects.
- Designing UI in Figma (Design tool) for WPF frontend development.
- Designing and developing WPF application (fontend, backend) with MVVM pattern.
- Upgrading and optimizing WinForm application from the previous developer.
- Using Visual Studio (Integrated development environment) to develop and debug the user interface, server-side solutions, and integrate with Python services.
- Using Pycharm (Integrated development environment) to develop AI algorithms and perform image processing to solve industrial problems, such as anomaly detection and object detection.
- Creating an installation package for the developed project to deploy to the client's machine with Inno Setup (Installer for Windows).
- Tools and languages: Visual Studio, Pycharm, Figma, inno setup, C#, Python.

Seoul, Korea

Aug. 2021 - Present

### System-on-Chip (SoC) Design Laboratory

MEMBER

- Coding python application for automatic program, CNN, ANN
- Researched and coded the hardware description language (Verilog, VHDL) and optimized the algorithm for FPGA and ASIC hardware.

Yongin, Korea

Mar. 2019 - Jul. 2021

### Laboratory of Intelligent System

MEMBER

- Researched the basic knowledge in related Image Processing, Programmable Logic Control, Micro Control Unit, Fundamental Electronics,...
- Researched machine learning: Neural Network, K-Nearest Neighbor, Fuzzy Logic.

Ho Chi Minh, Vietnam

Mar. 2015 - Dec. 2018

# Publications

---

## Embedding Clustering via Autoencoder and Projection onto Convex Set

ICSSE 2023

CONTRIBUTER

Jul. 2023

- Le-Anh Tran, **Thanh-Dat Nguyen**, Truong-Dong Do, Chung Nguyen Tran, Daehyun Kwon, Dong-Chul Park
- IEEE Xplore: 29 August 2023.

## Efficient Infrared and Thermal Imaging Fusion Approach for Real-time Human Detection in Heavy Smoke Scenarios

ICSSE 2023

CONTRIBUTER

Jul. 2023

- Nghe-Nhan Truong, My-Ha Le, Truong-Dong Do, Le-Anh Tran, **Thanh-Dat Nguyen**, Hoang-Hon Trinh
- IEEE Xplore: 29 August 2023.

## POCS-based Clustering Algorithm

IWIS 2022

CONTRIBUTER

Aug. 2022

- Le-Anh Tran, Henock M. Deberneh, Truong-Dong Do, **Thanh Dat Nguyen**, My-Ha Le, Dong-Chul Park
- IEEE Access, Volume 10, 2022.

## Energy-Efficient High-Speed ASIC Implementation of Convolutional Neural Network Using Novel Reduced Critical-Path Design

IEEE Access

2ST AUTHOR

Mar. 2022

- Sun Sik Lee, **Thanh Dat Nguyen**, Pramod Kumar Meher, Sang Yoon Park
- 2022 International Workshop on Intelligent Systems (IWIS).

## High-Speed ASIC Implementation of Tanh Activation Function Based on the CORDIC Algorithm

ITC-CSCC 2021

1ST AUTHOR

Jun. 2021

- **Thanh Dat Nguyen**, Dong Hwan Kim, Jin Seok Yang and Sang Yoon Park
- 2021 36th International Technical Conference on Circuits/Systems, Computers and Communications.

## Appliance Classification method based on K-Nearest Neighbors for Home Energy Management System

ICA-SYMP 2019

1ST AUTHOR

Aug. 2018

- **Thanh Dat Nguyen**, Truong Dong Do, Ngoc Thien Le, Watit Benjapolakul and My Ha Le
- The 2019 First International Symposium on Instrumentation, Control, Artificial Intelligence, and Robotics.

## IoT-Based Smart Plug-In Device for Home Energy Management System

GTSD 2018

1ST AUTHOR

Jul. 2018

- **Thanh Dat Nguyen**, Viet Khang Tran, Tan Duy Nguyen, Ngoc Thien Le, and My Ha Le
- 4th International Conference on Green Technology and Sustainable Development.

# Honors & Awards

---

## INTERNATIONAL

2018 **Certificate of Presentation**, The international robotic competition "TurtleBot3 with PiCamera", The 33rd International Technical Conference on Circuits/Systems, Computer and Communication. *Chulalongkorn, Thailand*

## DOMESTIC

2018 **1st Prize**, Programming with PLC Mitshubishi *HCM, Vietnam*  
2017 **1st Prize**, PLC Omron Programming Skills Competition 6th *HCM, Vietnam*  
2017 **Certificate**, Appreciation "WEPIC 2017" Competition *DaNang, Vietnam*  
2017 **Certificate**, Complete "Acer Cloud Professor" Training(IoT) *HCM, Vietnam*  
2016 **3rd Prize**, Led Circuit Design *HCM, Vietnam*

# Personal Qualities & Interests

---

- Sense of responsibility, reliability and carefulness.
- Ability to adapt to new surroundings, work independently with high motivation.
- Strong analytical skill, ability to solve problems.
- Interests: Software Development, Machine Learning, Image Processing, Database Management, Automation System.