

Nguyen Van Hau

Senior Research Engineer



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Thu Duc City, HCMC, VN



Education

Ph.D Candidate in Electrical and Computer Engineering (Completion holder)

Sungkyunkwan University, Korea

2013/03 – 2017/12

Master of Engineering in Electrical Engineering

University of Ulsan, Korea

2009/09 - 2011/09

Bachelor of Science in Electronic Physics

Vietnam National University – HCMC, University of Natural Science

2002/09 - 2006/09

Work Experience



SCAN ME

*Please scan QR code to view some video demo
for projects*

[Or Please click here to view](#)

Senior Research Engineer

T-Robotics, Pangyo Techno Valley, Korea

2018/07– 2021/03

1. Perception System for Serving Mobile Robot

Project manager & Developer

- Design a perception system for serving mobile robot: sensors (LiDAR, RGB-D cameras, RGB camera, Ultra-sonics sensors) selection and mounted position on robot.
- Camera calibration with robot base.
- Perception and motion control interface development.

- Develop core vision algorithms on NVIDIA Xavier NX Board: AI human Tracking, 3-D obstacle avoidance using fusing camera and LiDAR, face detection for lost target re-visit, ...

2. Vision-Based Auto-Docking Module

Developer

- Design a docking station for industrial mobile robot (arranging positions for LED light, markers, light diffusion covers -applied for Korea domestic patent).
- Develop vision algorithms for auto-docking.
- Interface with motion and control layer.

3. Wafer Notch Localization

Developer

- Develop vision algorithm to align a wafer notch with random position placement on a rotated dish.
- Localize the notch position and send command to motor.

Senior Research Engineer

Enjet Co.Ltd, Suwon, Korea

2018/01– 2021/03

1. Vision Solution for Semiconductor Printing Machine

Developer

- Develop vision algorithm to detect, measure, and estimate distance from a nozzle tip to substrate surface with precision in micrometer.
- Interface to motion control to guide a nozzle tip approaching to a surface.

Ph.D Researcher at Automation Lab

Sungkyunkwan Univ., Suwon, Korea

2013/03– 2017/12

1. Different Kind of Cameras Project (2 years)

Project manager & Developer

- Develop core framework for calibration process of multiple cameras mounted on different parts of vehicles.
- Apply camera calibrated parameters to merge frames acquired from cameras.
- Demonstrate a feasibility for improvement of perception tasks by using the proposed calibrated process.

2. Samsung Future Project (3 years)

Developer

- Involve in researching and developing a deep learning framework to detect vehicles and pedestrians under hostile conditions such sun flare, snowing, raining, ...

Computer Vision S.W Developer

Scopic Software, MA, US (online remoting)

2011/10 – 2012/12

- Algorithm developer for various computer vision applications playing on desktop or mobile devices: teeth whitening, panorama creator, MakeMeOld, ...

Embedded S.W Engineer

Schmid Enterprise, HCMC, VN

2006/10 - 2009/08

- Performing audio processing on FPGA/ DSP developer Kits to digital high-class speakers serving to German market.

Professional Skills



Patents

1. Deep Learning System Using Image Paterning Based on Convolution Neural Network and Image Learning Methof Using Same. *Patent No: 1020170096298 A.*
2. Stereo Image Rectification Methof for Heterogenous Cameras. *Patent No: 101823657 B1*

Achievements

- **1st Prize Team** for the embedded system sector in Autonomous Vehicle Competition 2017, Hyundai Motors Group
- **2nd Prize Team** for the algorithm on computer sector in Autonomous Vehicle Competition 2017, Hyundai Motors Group
- **Full Scholarship** for Master and Doctoral courses