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## THAI Thanh Tuan



### Objective

- To develop the knowledge of computer vision, machine learning/deep learning, and Artificial Intelligent.
- To work in a professional environment to improve skills and experiences.

### Technical Skills/Proficiencies

- Java (9/10)
- C, C# (9/10)
- Python (9/10), Tensorflow, Pytorch
- VB net (8/10)
- PHP, Drupal, Joomla (8/10)
- Linux (8/10)
- HTML, CSS, JavaScript (9/10)
- Deep learning (CNN, GAN, Unet, Segmentation, Depth estimation, Pose estimation, Image synthesize)
- 3D human model: SMPL, SMPLify, SPIN

### Foreign Language Skills

- Japanese Beginner
- English: Toeic IP(taken in Japan) Score: 765 Date: 5/2016
- English: Toeic(taken in Japan) Score: 745 Date: 2/2016

### Experience

10/2017 – 9/2022	Seoul National University of Science and Technology (SEOULTECH)	232 Gongneung-ro, Gongneung-dong, Nowon-gu, Seoul, Korea
PhD Student.		
<ul style="list-style-type: none"><li>• Research on the topic:</li><li>• UAV controller building, Image stitching and applying to 3D-TV, Virtual try on system, 3D human model reconstruction from 2D images.</li></ul>		
10/2016 – 7/2017	TMA Solutions	111 Nguyen Dinh Chinh, Phu Nhuan District, Ho Chi Minh City, Vietnam

<ul style="list-style-type: none"> <li>• Programmer:</li> <li>• Working on the topic: Develop social network using Angular 2.</li> </ul>		
<ul style="list-style-type: none"> <li>• Lab assistant.</li> <li>• Research on the topic: Tamper resilient techniques against side channel attacks.</li> </ul>	10/2015 – 9/2016 Japan Advanced Institute of Science and Technology	Nomi city, Ishikawa Prefecture, Japan
<ul style="list-style-type: none"> <li>• Programmer.</li> <li>• Design user interface for the emulator of training rocket solid system.</li> </ul>	9/2014 – 2/2015 Institute of tropical technology and environmental protection (VITTEP)	Ho Chi Minh city, Vietnam
<ul style="list-style-type: none"> <li>• Programmer.</li> <li>• Design user interface for medical equipments: electromed, magnomed, Back bone pull bed.</li> </ul>	6/2010 – 7/2014 Biomedical Institute of Physics - scientific and technical institutes military	Ho Chi Minh city, Vietnam
<ul style="list-style-type: none"> <li>• Teaching assistant: programming skill.</li> </ul>	1/2013 – 4/2013 Gia Dinh University	Ho Chi Minh city, Vietnam
<ul style="list-style-type: none"> <li>• Teaching assistant: programming skill, data structure and algorithm, graph theory, network programming, operating system, embedded system, computer architecture, information security, ...</li> </ul>	6/2010 - 9/2015 Ho Chi Minh city University of Technology (HUTECH)	Ho Chi Minh city, Vietnam

## Education

<i>Ho Chi Minh city University of Technology (HUTECH)</i> <ul style="list-style-type: none"> <li>• <i>Software Engineering. (7.13/10 _ 06/2010)</i></li> <li>• <i>Graduate thesis: Design and program a low price micromouse. (Supervisor: Dr. Le Manh Hai).</i></li> </ul>	<i>Ho Chi Minh city, Vietnam</i>	<i>BA of Software Engineer</i>
<i>University of Science – HCMVNU</i> <ul style="list-style-type: none"> <li>• <i>Computer Science. (8.14/10 _ 06/2015)</i></li> <li>• <i>Graduate thesis: Human identification using finger vein. (Supervisor: Assoc. Prof. Le Hoang Thai)</i></li> </ul>	<i>Ho Chi Minh city, Vietnam</i>	<i>Master of Computer Science</i>
<i>Co- program of JAIST and VNU Ho Chi Minh</i> <ul style="list-style-type: none"> <li>• <i>Information technology</i></li> </ul>	<i>Ho Chi Minh city, Vietnam</i>	<i>Master of Information Technology</i>
<i>Seoul National University of Science and Technology (SEOULTECH)</i> <ul style="list-style-type: none"> <li>• <i>Electrical and Information Engineering (95.2/100 _ 08/2022)</i></li> <li>• <i>Graduate thesis: Multiple pose virtual try based on 3D clothing reconstruction. (Supervisor: Prof. Heejune Ahn)</i></li> </ul>	<i>Seoul, Korea</i>	<i>PhD of Electrical and Information Engineering</i>

## Other training courses

- *Training course for National Olympiad of Computer (University level)(Teacher: Prof. Nguyen Xuan Huy).*
- *Visual inspection with OpenCV held as a joint event between Kyoto Institute of Technology and University of Science, HCMC - 2014.*
- *University didactics course: at Social Science and Humanity University - HCMVNU*

## Awards/Accomplishments

Consolation prizes in Vietnamese National Mathematical (Linear algebra) Olympiad for University Level.	2008
Monbukagakusho Honors Scholarship for Privately Financed International Students	2015
Seoultech Scholarship for excellent student	2017-2019
Second place in Image-based Multi-pose Virtual Try-on Challenge, CVPRW2020	2020
First place in AI Hackathon 2021 using Korean body shape and dimension measurement data	2021

#### Research Experience

Biometrics	Personal identification using finger vein	Feature extraction using MFRAT and GridPCA.
Robotics	Design micromouse, Line tracking robot, Robots for Robocon.	
Medical equipment	Electromed, magnomed and back bone pull bed.	Design user interface
Virtual try on(current)	Develop new method for virtual try on system.	Develop new virtual try on system
3D-TV	Stitching images to build panorama images	Research a new evaluation metrics
Other	Support system for training rocket soldiers.	Design user interface

#### Interests

- Pop music.
- Go fishing.
- Sport.

#### Research Article: Domestic

Meer Sadeq Billah, **Thai Thanh Tuan**, Heejune Ahn: Objective Quality Assessment for Stitched Image and Video, Proceedings of the Korean Society of Broadcast Engineers Conference. The Korean Institute of Broadcast and Media Engineers (2017)

**Thai Thanh Tuan**, Heejune Ahn: Deep image stitching: 3D image stitching with depth-map using DNN, Korean Society of Electrical Engineers Conference(대한 전자 공학회 학술 대회) (2018)

**Thai Thanh Tuan**, Matiur Rahman Minar, Heejune Ahn: Performance Evaluation of VTON (Virtual-Try-On) Algorithms using a Pair of Cloth and Human Image, Journal of the Korea Industrial Information Systems Research 24.6 (2019): 25-34.

Matiur Rahman Minar, **Thai Thanh Tuan**, Heejune Ahn: An Improved VTON (Virtual-Try-On) Algorithm using a Pair of Cloth and Human Image, Journal of the Korea Industrial Information Systems Research 25.2 (2020): 11-18.

Dashka Sandagdorj, **Thai Thanh Tuan**, Heejune Ahn: A Segmentation Guided Coarse to Fine Virtual Try-on Network for a new Clothing and Pose, Proceedings of the Korean Society of Broadcast Engineers Conference. The Korean Institute of Broadcast and Media Engineers (2020)

#### Research Article: International

Hoang Thien Van, **Thanh Tuan Thai**, Thai Hoang Le: Robust Finger Vein Identification Base on Discriminant Orientation Feature. KSE 2015: 348-353

Matiur Rahman Minar, **Thai Thanh Tuan**, Heejune Ahn, Paul L. Rosin, and Yu-Kun Lai: CP-VTON+: Clothing Shape and Texture Preserving Image-Based Virtual Try-On, IEEE CPVRW (2020)

Matiur Rahman Minar, **Thai Thanh Tuan**, Heejune Ahn, Paul Rosin, Yu-Kun Lai: 3D Reconstruction of Clothes using a Human Body Model and its Application to Image-based Virtual Try-On, IEEE CPVRW (2020)

Matiur Rahman Minar, **Thanh Tuan Thai**, Heejune Ahn: CloTH-VTON+: Clothing Three-Dimensional Reconstruction for Hybrid Image-Based Virtual Try-On. IEEE Access 9: 30960-30978 (2021)

**Thanh Tuan Thai**, Matjur Rahman Minar, Heejune Ahn, John Wainwright: Multiple Pose Virtual Try-On Based on 3D Clothing Reconstruction. *IEEE Access* 9: 114367-114380 (2021)

DongJun Gu, Youungsik Yun, **Thanh Tuan Thai**, Heejune Ahn: Dense-Pose2SMPL: 3D Human Body Shape Estimation from a Single and Multiple Images and its Performance Study. *IEEE Access* (2022)

## Languages

- Mother tongue: Vietnamese.

## Future research

- Biometrics.
- Computer vision for applying in robotics.
- 3D human model reconstruction
- Virtual try on system

## References

<i>Dr. Hai Le Manh</i>	<i>Dean of information technology faculty, Gia Dinh University, Vietnam</i>	<a href="mailto:hailemanh@yahoo.com">hailemanh@yahoo.com</a>
<i>Dr. Hoang Van Thien</i>	<i>Dean of information technology faculty, Sai Gon international universtity, Vietnam</i>	<a href="mailto:vthoang@hcmhutech.edu.vn">vthoang@hcmhutech.edu.vn</a>
<i>Prof. Heejune Ahn</i>	<i>Seoul National University of Science and Technology</i>	<a href="mailto:heejune@seoultech.ac.kr">heejune@seoultech.ac.kr</a>