Pha NGUYEN

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EDUCATION

University of Science - Vietnam National University HCMC, Vietnam 2016 - 2020 B.Sc. in Computer Science Faculty of Information Technology

• Honors graduate thesis: Multiple pedestrian tracking with Siamese Tracker

o Grade: 10/10

Advisor: Dr. Tuan Hue THISupervisor: Dr. Son Thai TRAN

Le Quy Don High School for the Gifted, Vietnam

2013 - 2016

Major in Algorithm

Publication

Conference Paper

• Pha A. Nguyen and S. T. Tran, "Tracking customers in crowded retail scenes with Siamese Tracker," in *Proceedings of the 2020 IEEE-RIVF International Conference on Computing And Communication Technologies*, October 2020. (Oral presentation)

Research Experience

VinAI Research, Vietnam

Mar 2020 - Present

Research Engineer

Department of Applied Research

- \bullet Researched and developed a large-scale indexing system to store millions of identities, under the guidance of Prof. Khoa LUU
- Researched and applied ML/DL techniques to solve stereo camera calibration, depth estimation, face beautification problems for VSmart smartphones

Independent Research

Sep 2019 - Present

• Developed a SiamRPN-based MOT algorithm that outperforms state-of-the-arts on private retail scene dataset, under the guidance of Dr. Tuan Hue THI

TEACHING Experience

FUNiX University, Vietnam

Sep 2019 - Present

Mentor & Coach

- Suggested training programs, coached and offered guidance for undergraduate students
- Selective courses:
 - MLP301x_01_EN Machine Learning
 - o DSP301x_01_EN Data Science
 - CSD201x_01_EN Data Structures and Algorithms

Work Experience

GE3F Co.LTD, Singapore

 $Sep\ 2019$ - $Jan\ 2020$

 $AI\ Engineer$

- Developed human-robot interaction system on pre-built hardware
- Improved quality inspection system's accuracy from 81% to 92% on private circuit dataset by implementing Label Smoothing Loss function and adding several data augmentation methods

EyeQ Tech, Vietnam

Sep 2017 - Aug 2019

Computer Vision Engineer & AI Researcher

- Researched and applied ML/DL techniques to solve face detection, face recognition, head pose estimation, emotion recognition, object detection, activity detection, traffic analysis problems
- Improved the head pose estimation algorithm's accuracy from 71% to 93% on 360,000 images dataset by adding Kalman Filter
- Improved the facial recognition pipeline's accuracy from 90% to 95% on 7,000,000 face images of 1,000,000 people by implementing Set-to-Set Matching algorithm and Face Pruning algorithm
- Reduced the facial recognition pipeline's processing time to near real-time by implementing DeepSORT Tracking algorithm and Face Embedding Hasing system
- Deployed scalable and automatical ML/DL applications with Docker and Kubernetes

TECHNICAL SKILLS

Efficient: Deep Learning, Computer Vision, Python, C++, API Development, Docker, LATEX Familiar: C#, Java, Database, Parallel Programming, Embedded Systems

Honors and Awards

2019

- Glints Vietnam Scholarship for young talents
- Top 5 Highest Scoring Teams in the KVision \times VIISA Hackathon
- Special Honors Participant in the International Youth Math Challenge for submitting a well-written solution

2015

- Odon Vallet Scholarship for outstanding students
- Silver Medal from the Southern Vietnam Olympiad in Algorithm
- Honorable Mention Award in the Excellent Competition in Algorithm
- Third Place in the IT Competition for Youth in Creative Software

2014

- Silver Medal from the Southern Vietnam Olympiad in Algorithm
- Third Place in the Excellent Competition in Algorithm
- Third Place in the IT Competition for Youth in Creative Software

ACTIVITIES

xDay event by FUNiX University

Mar 2020

Data Science Coach

International Youth Math Challenge

Oct 2019

Participant

AI Talk Series by Talent UP! Vietnam

Jul 2019

Speaker

Professional Membership

Student Member of the Institute of Electrical and Electronics Engineers (IEEE)

Referees

Dr. Tuan Hue THI, Amazon Go

Senior Research Engineer

Dr. Son Thai TRAN, University of Science - VNUHCMC

Vice Head of Department of Computer Vision and Cognitive Cybernetics