# Thanh Tang NGUYEN

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Applied Artificial Intelligence Institute (A<sup>2</sup>I<sup>2</sup>)

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## **EDUCATION**

#### • Deakin University, Australia

2019-2023

PhD student in Machine Learning and Artificial Intelligence

Thesis: Reinforcement Learning and Bayesian optimization: A Distributional Perspective Advisor: Sunil Gupta & Svetha Venkatesh

• Ulsan National Institute of Science and Technology (UNIST), South Korea Feb. 2018 M.S. in Computer Science & Engineering (GPA: 4.3 / 4.0)

 $The sis: \ Parametric \ Information \ Bottleneck \ to \ Optimize \ Stochastic \ Neural \ Networks$ 

Advisor: Jaesik Choi

• Da Nang University of Science and Technology (DUST), Vietnam

B.S. in Electronic and Communication Engineering (valedictorian)

Jul. 2015

• Da Nang Le Quy Don high school for gifted students, Vietnam High School Diploma in Mathematics

Sept. 2010

## RESEARCH INTERESTS

Reinforcement Learning; Optimal Transport; Variational Bayes; Information Theory; Uncertainty and Generalization in Deep Neural Networks.

#### Experience

• Researcher Mar. 2018 - Dec. 2018 Ulsan National Institute of Science and Technology (South Korea), School of Computer Science & Engineering, Statistical Artificial Intelligent Lab (SAIL).

• Research & Teaching Assistant Mar. 2016 - Mar. 2018

Ulsan National Institute of Science and Technology (South Korea), School of Computer Science & Engineering, Statistical Artificial Intelligent Lab (SAIL).

• Teaching Assistant Aug. 2015 - Mar. 2016

Da Nang University of Science and Technology (Vietnam), Center of Excellence, Electronic and Communication Engineering.

 Mobile Network Intern & Engineer Viettel Network Corporation (Vietnam). Jan. 2015 - Aug. 2015

• Teaching Assistant & Research Assistant Oct. 2014 - Jan. 2015 Da Nang University of Science and Technology (Vietnam), Center of Excellence, Electronic and Communication Engineering.

#### **PUBLICATIONS**

- TT Nguyen, S. Gupta, H. Ha, S. Rana, and S. Venkatesh. *Distributionally Robust Bayesian Quadrature Optimization*. Proceedings of the 23rd International Conference on Artificial Intelligence and Statistics (AISTATS), Palermo, Italy, 2020.
- TT Nguyen, and J. Choi. Markov Information Bottleneck to Improve Information Flow in Stochastic Neural Networks. Entropy, 21(10), 976, 2019.
- H. Ha, S. Rana, S. Gupta, <u>TT Nguyen</u>, H. Tran-The, and S. Venkatesh. *Bayesian Optimization with Unknown Search Space*. Proceedings of the Advances in Neural Information Processing Systems (**NeurIPS**) 32, Vancouver, BC, Canada, 814 December, 2019.
- TT Nguyen, and J. Choi. Parametric Information Bottleneck to Optimize Stochastic Neural Networks. Proceedings of the International Symposium on Perception, Action and Cognitive Systems (PACS), p. 23-30, Seoul, Korea, 2017. (Best Poster Award)

# Selected Awards

- Australian Research Council (ARC) and PRaDA Postgraduate Research Scholarship 2019-2023;
- Ulsan National Institute of Science and Technology Postgraduate Scholarship, 2016;
- Valedictorian and the sole First-Class Graduate in the Electronic and Communication Engineering Program at the Center of Excellence (an advanced engineering program), Da Nang University of Science and Technology, 2015;
- Scholarships for Outstanding Academic Excellence from Da Nang University of Science and Technology in 2010 2015;
- JENESYS 2.0 Exchange student by Japan International Cooperation Center 2015;
- Sunflower Mission Engineering & Technology Scholarship by eSilicon and Texas Instrument, 2014;
- Third and Second Prize in Mathematics Competition of Da Nang University in 2012 and 2013 resp.;
- Takemoto Denki scholarship in 2012; Lawrence S.Ting scholarship per academic year from 2013 to 2015; Nguyen Thai-Binh Scholarship in 2013; Thanh-Nhan Scholarship in 2013;
- First Prize in the National Competition of Solving Mathematical Problems by the Journal of Mathematics and Youth, 2010;
- Silver Medal in Southern Vietnam Mathematics Olympiad, 2008;
- First Prizes in Da Nang Mathematics Competition for high school students in 2008, 2009, and 2010.

#### SKILLS

Programming languages : Python, Java, C++, C, MATLAB.

Deep Learning frameworks : Tensorflow, Theano, Caffe.

Parallel Computing frameworks : OpenMP, MPI, CUDA, pthreads.

#### LANGUAGES

Vietnamese : Native

English : Proficient (TOEFL iBT score of 96)

## REFERENCES

- Alfred Deakin Prof. Svetha Venkatesh Deakin University Applied Artificial Intelligence Institute svetha.venkatesh@deakin.edu.au
- Assoc. Prof. Sunil Gupta
   Deakin University
   Applied Artificial Intelligence Institute
   sunil.gupta@deakin.edu.au
- Assoc. Prof. Jaesik Choi Korea Advanced Institute of Science and Technology (KAIST) School of Artificial Intelligence Statistical Artificial Intelligent Lab (SAIL) jaesik@kaist.ac.kr

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  Technical Center II Viettel Networks Corporation
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