Thanh Nguyen-Tang

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Deakin University
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Education

- **Deakin University**, Geelong, Australia (expected) 2021
  PhD candidate in Machine Learning and Statistics
  - Thesis: On Practical Considerations of Reinforcement Learning: Robustness, Scalability and Statistical Efficiency
- **Ulsan National Institute of Science and Technology (UNIST)**, South Korea 2018
  M.S. in Computer Science & Engineering (GPA: 4.3/4.0, Top-1 graduate)
  - Thesis: Parametric information bottleneck to optimize stochastic neural networks
- **Da Nang University of Science and Technology**, Vietnam 2015
  B.Eng. in Electronic and Communication Engineering (advanced program, valedictorian)

Experience

- **Student Researcher** Jan. 2019 - present
  The Applied Artificial Intelligence Institute, Deakin University, Australia;
- **Researcher** Mar. 2018 - Dec. 2018
  Statistical Artificial Intelligent Lab (SAIL), School of Computer Science & Engineering, Ulsan National Institute of Science and Technology (South Korea);
- **Research & Teaching Assistant** Mar. 2016 - Mar. 2018
  Statistical Artificial Intelligent Lab (SAIL), School of Computer Science & Engineering, Ulsan National Institute of Science and Technology (South Korea);

Research Interests

Machine Learning, Reinforcement Learning, Statistics, Representation Learning, Generalization Beyond i.i.d. Settings.

Publications

- T. Nguyen-Tang, S. Gupta, and S. Venkatesh. Distributional Reinforcement Learning via Moment Matching. Proceedings of the 35th AAAI Conference on Artificial Intelligence (**AAAI**), Vancouver, Canada, Feb. 2-9, 2021.
- T. Nguyen-Tang, 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.
- T. Nguyen-Tang, 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, T. Nguyen-Tang, 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, 8–14 December, 2019.
- T. Nguyen-Tang, 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)

Preprints

- H. Tran-The, S. Gupta, T. Nguyen-Tang, S. Rana, and S. Venkatesh. Combining Online Learning and Offline Learning for Contextual Bandits with Deficient Support. Under review, 2021.
- T. Nguyen-Tang, S. Gupta, H. Tran-The, and S. Venkatesh. On Finite-Sample Analysis of Batch Reinforcement Learning with Deep ReLU Networks. Under review. 2021.

Poster Presentation/Talks

- Apr. 25, 2021: *On Finite-Sample Analysis of Batch Reinforcement Learning with Deep ReLU Networks* at Viet.Operator.Theorists.
- Feb. 5, 2021: *Distributional Reinforcement Learning via Moment Matching* at AAAI 2021.
- Aug. 26-28, 2020: *Distributionally Robust Bayesian Quadrature Optimization* at AISTATS 2020 @ Palermo, Italy.
- Jun. 28-Jul. 10, 2020: *Moment Matching Reinforcement Learning* at MLSS 2020 @ Max Planck Institute for Intelligent Systems, Tübingen, Germany.
- Nov. 2-7, 2017: *Parametric Information Bottleneck to Optimize Stochastic Neural Networks* at PACS 2017 @ SNU, Seoul, Korea (Best Poster Award).

Selected Awards

- An outstanding reviewer for ICLR'21;
- Machine Learning Summer School (MLSS) 2020 at the Max Planck Institute for Intelligent Systems, Tübingen, Germany (acceptance rate: 13.84%);
- Australian Research Council (ARC) and PRaDA Postgraduate Research Scholarship 2019-2023;
- Best Poster Award, the International Symposium on Perception, Action and Cognitive Systems, 2017;
- Ulsan National Institute of Science and Technology Postgraduate Scholarship, 2016-2018;
- 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;
- First Prize in the National Competition of Solving Mathematical Problems by the Journal of Mathematics and Youth, 2010;

Professional/Community Serving

- Invited reviewer: ICML (2021), AAAI (2021), AISTATS (2021), ICLR (2021 - **outstanding reviewer**), NeurIPS (2020, 2021), IJCNN (2020);
- Technical consultant: EM&AI Joint-Stock Company;
- Mentoring: University of Toronto (Canada), Ho Chi Minh University of Technology (Vietnam), Sharif University of Technology (Iran).

Skills

- Programming: Python, Tensorflow, MATLAB, Pytorch, C++;
- Languages: Vietnamese (native), English (proficient, TOEFL iBT 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

(Updated: April 7, 2021)