

Guang-He Lee

Stata Center, Bldg 32-G496, Cambridge MA 02139

☎ 617-800-7547 | ✉ guanghe@mit.edu | 🏠 guanghelee.github.io

Research Interest: Machine Learning (esp. Deep Learning), Interpretability, Robustness, and Structured Data

Education

Massachusetts Institute of Technology (MIT)

Cambridge, MA

PH.D. IN COMPUTER SCIENCE AND ARTIFICIAL INTELLIGENCE LABORATORY (CSAIL)

2017 - now

- Advisor: Tommi S. Jaakkola
- GPA: 5.0/5.0; Selected Courses: Inference & Information, Algorithms for Inference, Statistical Learning Theory, Nonlinear Optimization

National Taiwan University (NTU)

Taipei, Taiwan

M.S./B.S. IN DEPT. OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (CSIE)

2016 - 2017/2011 - 2015

- (M.S.) Advisor: Yun-Nung (Vivian) Chen. Thesis: Unsupervised Sense Representation by Reinforcement Learning [\[PDF\]](#)
- (B.S.) GPA: 4.2/4.3; Rank: 2/111; Straight A+ in undergraduate CSIE courses.

Papers and Patents

CONFERENCE PAPERS

- [1] [G.-H. Lee](#), Y. Yuan, S. Chang, and T. S. Jaakkola, "A Stratified Approach to Robustness for Randomly Smoothed Classifiers" in *Neural Information Processing Systems (NeurIPS)*, 2019. [\[link\]](#)
- [2] [G.-H. Lee](#), W. Jin, D. Alvarez-Melis, and T. S. Jaakkola, "Functional Transparency for Structured Data: a Game-Theoretic Approach" in *International Conference on Machine Learning (ICML)*, 2019. [\[link\]](#)
- [3] [G.-H. Lee](#), D. Alvarez-Melis, and T. S. Jaakkola, "Towards Robust, Locally Linear Deep Networks" in *International Conference on Learning Representations (ICLR)*, 2019. [\[link\]](#)
- [4] H. He, H. Wang, [G.-H. Lee](#), and Y. Tian, "ProbGAN: Towards Probabilistic GAN with Theoretical Guarantees" in *International Conference on Learning Representations (ICLR)*, 2019. [\[link\]](#)
- [5] C.-Y. Hsu, R. Hristov, [G.-H. Lee](#), M. Zhao, and D. Katabi, "Enabling Identification and Behavioral Sensing in Homes using Radio Reflections" in *ACM Conference on Human Factors in Computing Systems (CHI)*, 2019. [\[link\]](#)
- [6] [G.-H. Lee*](#), Y. Tian*, H. He*, C.-Y. Hsu, and D. Katabi, "RF-Based Fall Monitoring Using Convolutional Neural Networks" in *ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp / IMWUT)*, 2018. [\[link\]](#)
- [7] [G.-H. Lee](#) and Y.-N. Chen, "MUSE: Modularizing Unsupervised Sense Embeddings" in *Empirical Methods in Natural Language Processing (EMNLP)*, 2017. [\[link\]](#)
- [8] [G.-H. Lee](#) and S.-D. Lin, "LambdaMF: Learning Nonsmooth Ranking Functions in Matrix Factorization Using Lambda," in *International Conference on Data Mining (ICDM)*, 2015. [\[link\]](#)

WORKSHOP PAPERS

- [9] [G.-H. Lee](#), D. Alvarez-Melis, and T. S. Jaakkola, "Game-Theoretic Interpretability for Temporal Modeling" in *the 5th Workshop on Fairness, Accountability, and Transparency in Machine Learning (FAT/ML 2018) at ICML 2018* [\[link\]](#)
- [10] H. He, H. Wang, [G.-H. Lee](#), and Y. Tian, "Bayesian Modelling and Monte Carlo Inference for GAN" in *ICML 2018 Workshop on Theoretical Foundations and Applications of Deep Generative Models*, 2018. [\[link\]](#)

Honors and Awards

Best Master Thesis Award

ACLCLP

- Recognizes the Best Master Thesis in NLP research among all universities in Taiwan.

2017

Best Master Thesis Award

TAAI

- Recognizes the Best Master Thesis in AI research among all universities in Taiwan.

2017

Presidential Awards (8 times)

NTU

- Recognizes students with top 5% GPA in each department in each semester.

2011-2015 (every semester)

The Honorary Member of the Phi Tau Phi Scholastic Honor Society

Phi Tau Phi Scholastic Honor Society

- Honors top 1% of undergraduate graduands in academic performance and moral conduct among about 300 graduands in the College of EECS at NTU.

2015

Microsoft-IEEE Young Fellowship

Microsoft Research Asia and IEEE

- Recognizes prominent young researchers in Asia (3 recipients in Taiwan).

2014

Irving T. Ho Memorial Scholarship

Irving T. Ho Memorial Foundation

- Awards to top undergraduate students in the College of EECS at NTU (4 recipients in 2013 and 2 recipients in 2014).

2013 and 2014

Professional and Extracurricular Activity

Program Committee Member

- 33rd AAAI Conference on Artificial Intelligence (AAAI 2019)

Reviewer

- 2019 ICML workshop on Learning and Reasoning with Graph-Structured Representations
- 2018 ICML workshop on Theoretical Foundations and Applications of Deep Generative Models

Teaching Assistant

Dept. of IDSS, MIT

- Applied Machine Learning, instructed by Prof. Tommi S. Jaakkola and Regina Barzilay

2018

Teaching Assistant

Dept. of CSIE, NTU

- Intelligent Conversational Bot, Spring 2017 (88 students), instructed by Prof. Yun-Nung Chen.
- Machine Discovery, Fall 2016 (90 students), instructed by Prof. Shou-De Lin.
- Algorithm Design and Analysis, Fall 2013 (82 students), instructed by Prof. Hsin-Mu Tsai.

2017, 2016, and 2013

Research Intern

Intel Labs, Intel Corporation

- Robust Machine Learning, Passive RFID tracking, and Cost-sensitive Deep Learning

2015

Student Volunteer

Ukulele Club, NTU

CHARITY CAMP FOR COUNTRYSIDE ELEMENTARY SCHOOL

2014

- Raised 40 ukuleles and taught disadvantaged children to play ukulele.

Director of Team Mentors

Dept. of CSIE, NTU

NTU CSIE CAMP FOR SENIOR HIGH SCHOOL STUDENTS

2012

- Led 20 mentors (college students) to train 100 participated senior high school students on basic computer science.