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## EDUCATION

- 2017– **Massachusetts Institute of Technology**, Ph.D. in Computer Science.  
Advisor: Tommi S. Jaakkola. Focus: machine learning, transparency, interpretability, robustness.
- 2016–2017 **National Taiwan University**, M.S. in Computer Science and Information Engineering.  
Advisor: Yun-Nung Chen. Thesis: *Unsupervised Sense Representation by Reinforcement Learning*
- 2011–2015 **National Taiwan University**, B.S. in Computer Science and Information Engineering.  
GPA: 4.20/4.30. Rank: 2/111. Straight A+ in undergraduate CSIE courses.

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## RESEARCH EXPERIENCE

- 2018– **Research Assistant**, machine learning group at MIT CSAIL.  
◦ Supervisor: Tommi S. Jaakkola.  
◦ Recent projects: interpretable and/or robust machine learning.
- 06–08/2020 **Research Intern**, Citadel LLC.  
◦ Manager: Yu (Alan) Xin.  
◦ Projects: transfer learning and meta learning in financial markets.
- 2017–2018 **Research Assistant**, NETMIT group at MIT CSAIL.  
◦ Supervisor: Dina Katabi.  
◦ Projects: machine learning and wireless sensing for behavioral monitoring.
- 2016–2017 **Research Assistant**, National Taiwan University.  
◦ Supervisor: Yun-Nung (Vivian) Chen.  
◦ Project: unsupervised word sense representation learning.
- 06–09/2015 **Research Intern**, Intel Labs, Intel Corporation.  
◦ Mentor: Shao-Wen Yang. Manager: Yen-Kuang Chen.  
◦ Projects: robust tensor factorization and passive RFID tracking.
- 2013–2015 **Research Assistant**, National Taiwan University.  
◦ Supervisor: Shou-De Lin.  
◦ Projects: learning-to-rank matrix factorization and data mining applications.

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## SELECTED HONORS AND AWARDS

- 2017 **Best Master Thesis Award**, TAAI.  
Recognizes the best master thesis in AI research among all universities in Taiwan.
- 2017 **Best Master Thesis Award**, ACLCLP.  
Recognizes the best master thesis in NLP research among all universities in Taiwan.
- 2011–2015 **Presidential Awards (every semester)**, National Taiwan University.  
Recognizes students with top 5% GPA in each department in each semester.
- 2015 **Phi Tau Phi**, 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 National Taiwan University.
- 2014 **Microsoft-IEEE Young Fellowship**, Microsoft Research Asia and IEEE.  
Recognizes prominent young researchers in Asia (3 recipients in Taiwan).

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## SELECTED PUBLICATIONS

### CONFERENCE AND JOURNAL PUBLICATIONS

- [13] **G.-H. Lee** and T. S. Jaakkola, “*Oblique Decision Trees from Derivatives of ReLU Networks*”, in *International Conference on Learning Representations (ICLR)*, 2020.

- [12] C.-Y. Hsu, A. Zeitoun, **G.-H. Lee**, D. Katabi, and T. S. Jaakkola., “Self-Supervised Learning of Appliance Usage”, in *International Conference on Learning Representations (ICLR)*, 2020.
- [11] **G.-H. Lee**, Y. Yuan, S. Chang, and T. S. Jaakkola, “Tight Certificates of Adversarial Robustness for Randomly Smoothed Classifiers”, in *Advances in Neural Information Processing Systems (NeurIPS)*, 2019.
- [10] **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.
- [9] **G.-H. Lee**, D. Alvarez-Melis, and T. S. Jaakkola, “Towards Robust, Locally Linear Deep Networks”, in *International Conference on Learning Representations (ICLR)*, 2019.
- [8] 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.
- [7] 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.
- [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.
- [5] **G.-H. Lee** and Y.-N. Chen, “MUSE: Modularizing Unsupervised Sense Embeddings”, in *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2017.
- [4] **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.

#### WORKSHOP CONTRIBUTIONS

- [3] J. Teng, **G.-H. Lee**, and Y. Yuan, “ $\ell_1$  Adversarial Robustness Certificates: a Randomized Smoothing Approach”, in *Uncertainty and Robustness in Deep Learning (ICML workshop)*, 2020.
- [2] **G.-H. Lee**, D. Alvarez-Melis, and T. S. Jaakkola, “Game-Theoretic Interpretability for Temporal Modeling”, in *Fairness, Accountability, and Transparency in Machine Learning (ICML workshop)*, 2018.

#### THESIS

- [1] **G.-H. Lee**, “Unsupervised Sense Representation by Reinforcement Learning”, M.S. Thesis. National Taiwan University, 2017.

#### TEACHING EXPERIENCE

- Spring 2018 **Teaching Assistant**, 6.86x: *Applied Machine Learning*, online course, MIT.
- Spring 2017 **Teaching Assistant**, *Intelligent Conversational Bot*, 88 students, NTU.
- Fall 2016 **Teaching Assistant**, *Machine Discovery*, 90 students, NTU.
- Fall 2013 **Teaching Assistant**, *Algorithm Design and Analysis*, 82 students, NTU.

#### PROFESSIONAL ACTIVITIES AND SERVICE

- Committee MIT EECS Graduate Admissions Committee (2019, 2020).
- Reviewer ICML workshops 2018/2019, AAAI 2019, IJCAI-PRICAI 2020, ICLR 2021.
- Director Director of team mentors, NTU CSIE camp for senior high school students.

#### ET CETERA

- 2015-2016 **Substitute Military Service**, Taiwan Government.
- 2014 **Student Volunteer**, charity camp for countryside elementary school, Ukulele Club, NTU.