
EDUCATION

- 2017–2021 **Massachusetts Institute of Technology**, Ph.D. in Computer Science.
Focus: machine learning & transparency. Minor: statistics & optimization. Advisor: Tommi Jaakkola.
- 2016–2017 **National Taiwan University**, M.S. in Computer Science and Information Engineering.
Focus: natural language processing & machine learning. Advisor: Yun-Nung (Vivian) Chen.
- 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.

RESEARCH EXPERIENCE

- 2018–2021 **Research Assistant**, machine learning group at MIT CSAIL.
◦ Supervisor: Tommi Jaakkola.
◦ 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.

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).

SELECTED PUBLICATIONS

CONFERENCE AND JOURNAL PUBLICATIONS

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

- [13] 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.
- [12] **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.
- [11] **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.
- [10] **G.-H. Lee**, D. Alvarez-Melis, and T. S. Jaakkola, “Towards Robust, Locally Linear Deep Networks”, in *International Conference on Learning Representations (ICLR)*, 2019.
- [9] 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.
- [8] 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.
- [7] Y. Tian*, **G.-H. Lee***, 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.
- [6] **G.-H. Lee** and Y.-N. Chen, “MUSE: Modularizing Unsupervised Sense Embeddings”, in *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2017.
- [5] **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

- [4] J. Teng, **G.-H. Lee**, and Y. Yuan, “ ℓ_1 Adversarial Robustness Certificates: a Randomized Smoothing Approach”, in *Uncertainty and Robustness in Deep Learning (ICML workshop)*, 2020.
- [3] **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.

THESES

- [2] **G.-H. Lee**, “Building Transparent Models”, Ph.D. Thesis. Massachusetts Institute of Technology, 2021.
- [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 SERVICE AND SKILLS

- Committee MIT EECS Graduate Admissions Committee (2019, 2020).
- Reviewer ICML workshops 2018/2019, AAAI 2019, IJCAI-PRICAI 2020, ICLR 2021, NeurIPS 2021, JMLR.
- Language Mandarin (native), English (fluent), Japanese (intermediate).