Lantao Yu

Ph.D. in Computer Science – Stanford University – California, USA

lantaoyu@cs.stanford.edu • lantaoyu.com

Education

Stanford University — **Stanford, USA**, *Sep. 2018-Now*

- Ph.D. Student, Computer Science Department
- Advisor: Prof. Stefano Ermon

Shanghai Jiao Tong University — **Shanghai, China**, *Sep. 2014-Jun. 2018*

- B.Eng. in Computer Science and Technology
- Zhiyuan Honors Program of Engineering (an elite program for top 5% talented students)
- Advisors: Prof. Weinan Zhang, Prof. Yong Yu and Prof. Jun Wang (University College London)

Internship

Carnegie Mellon University — **Pittsburgh, USA**, *Aug. 2017-Feb. 2018*

- Research Intern, Institute for Software Research, School of Computer Science
- Research on Multi-Agent Machine Learning and Computational Sustainability
- Advisor: Prof. Fei Fang

Research Interests

My research interests lie in the general area of machine learning, particularly in deep learning, reinforcement learning and probabilistic graphical models, as well as their applications in sequential decision making, generative modeling, multi-task and meta-learning and multi-agent systems.

Publications (☞ Google Scholar Profile)

Meta-Inverse Reinforcement Learning with Probabilistic Context Variables

- **Lantao Yu***, Tianhe Yu* (equal contribution), Chelsea Finn, Stefano Ermon.
- In *Proceedings of the 33rd Conference on Neural Information Processing Systems.* **NeurIPS 2019**.

Multi-Agent Adversarial Inverse Reinforcement Learning

- **Lantao Yu**, Jiaming Song, Stefano Ermon.
- In *Proceedings of the 36th International Conference on Machine Learning.* **ICML 2019**.

CoT: Cooperative Training for Generative Modeling

- Sidi Lu, **Lantao Yu**, Siyuan Feng, Yaoming Zhu, Weinan Zhang, Yong Yu.
- In *Proceedings of the 36th International Conference on Machine Learning.* **ICML 2019**.

Lipschitz Generative Adversarial Nets

- Zhiming Zhou, Jiadong Liang, Yuxuan Song, **Lantao Yu**, Hongwei Wang, Weinan Zhang, Yong Yu, Zhihua
- In *Proceedings of the 36th International Conference on Machine Learning.* **ICML 2019**.

Deep Reinforcement Learning for Green Security Games with Real-Time Information

- Yufei Wang, Zheyuan Ryan Shi, **Lantao Yu**, Yi Wu, Rohit Singh, Lucas Joppa, Fei Fang.
- In *Proceedings of the 33rd AAAI Conference on Artificial Intelligence.* **AAAI 2019**.

Deep Reinforcement Learning for Green Security Game with Online Information

- **Lantao Yu**, Yi Wu, Rohit Singh, Lucas Joppa and Fei Fang.
- In *Workshop on Artificial Intelligence for Imperfect-Information Games at* ***AAAI 2018***.

An Empirical Study of AI Population Dynamics with Million-agent Reinforcement Learning

- **Lantao Yu***, Yaodong Yang*, Yiwei Bai* (equal contribution), Jun Wang, Weinan Zhang, Ying Wen, Yong Yu.
- In *Proceedings of the 17th International Conference on Autonomous Agents and Multi-Agent Systems.* **AAMAS 2018**.

Exploiting Real-World Data and Human Knowledge for Predicting Wildlife Poaching

- Swaminathan Gurumurthy, **Lantao Yu**, Chenyan Zhang, Yongchao Jin, Weiping Li, Xiaodong Zhang, Fei Fang.
- In *Proceedings of the ACM SIGCAS Conference on Computing and Sustainable Societies.* **COMPASS 2018**.
- Abridged in *AI for Social Good Workshop at **NeurIPS 2018***.

IRGAN: A Minimax Game for Unifying Generative and Discriminative Information Retrieval Models

- Jun Wang, **Lantao Yu**, Weinan Zhang, Yu Gong, Yinghui Xu, Benyou Wang, Peng Zhang, Dell Zhang.
- In *Proceedings of the 40th International ACM SIGIR Conference on Research and Development in Information Retrieval*. **SIGIR 2017**. **Best Paper Award Honorable Mention.**

A Dynamic Attention Deep Model for Article Recommendation by Learning Human Editors' Demonstration

- **Lantao Yu***, Xuejian Wang* (equal contribution), Kan Ren, Guanyu Tao, Weinan Zhang, Yong Yu, Jun Wang.
- In *Proceedings of the 23rd SIGKDD Conference on Knowledge Discovery and Data Mining*. **KDD 2017.**

SeqGAN: Sequence Generative Adversarial Nets with Policy Gradient

- **Lantao Yu**, Weinan Zhang, Jun Wang, Yong Yu.
- In *Proceedings of the 31st AAAI Conference on Artificial Intelligence*. **AAAI 2017.**

Manuscripts

Open Set Semi-Supervised Learning

- Zhangjie Cao, **Lantao Yu**, Stefano Ermon.
- In submission to AAAI 2019.

Variational Bottleneck Domain Adaptation

- Yuxuan Song, **Lantao Yu**, Zhangjie Cao, Zhiming Zhou, Jian Shen, Shuo Shao, Weinan Zhang, Yong Yu.
- In submission to AAAI 2019.

Understanding the Effectiveness of Lipschitz Constraint in Training GANs via Gradient Analysis

- Zhiming Zhou, Yuxuan Song, **Lantao Yu**, Hongwei Wang, Jiadong Liang, Weinan Zhang, Zhihua Zhang, Yong Yu. Technical report. arXiv preprint arXiv:1807.00751, 2018.

Honors and Awards

- **School of Engineering Fellowship** (USD $70,000), Stanford University. 2018
- **Excellent Bachelor Thesis** (☞ Link) (Top 1%),*"Adversarial and Cooperative Methods for Neural Text Generation"*, Shanghai Jiao Tong University. 2018
- **Zhiyuan Honor Degree of B.Sc in Computer Science and Technology** (☞ Link), Shanghai Jiao Tong University. 2018
- **IEEE Special Scholarship** (RMB ¥100,000) (Top 2 students in School of Electronic Information and Electrical Engineering), Shanghai Jiao Tong University. 2017
- **Best Paper Award Honorable Mention** (☞ Link)**, SIGIR 2017**.
- **Scholarship of Excellent Undergraduates** (Top 2 students in School of Electronic Information and Electrical Engineering), Shanghai Jiao Tong University. 2017
- **National Scholarship** (Top 3 students in CS Department), Ministry of Education of P.R.China. 2016.
- **Zhiyuan College Honors Scholarship** (Top 5%), Shanghai Jiao Tong University. 2015 & 2016.
- **Overall GPA Ranking Top 3 out of 151** (☞ Link) (Sophomore GPA Ranking 1st/151), Department of Computer Science, Shanghai Jiao Tong University. 2014-2017.

- **Yuan-Ze Scholarship** (Top 2% in Computer Science Department), Zhiyuan College. 2015.
- **First Prize** in China Undergraduate Mathematical Contest in Modeling, Shanghai Division. 2015

Services

- PC member of AAAI 2019, AAAI 2020.
- Sub-reviewer of PIC 2016, SIGIR 2017, TALLIP 2017.

Open Source Projects

- Implementation of SeqGAN. 1400+ stars, 500+ forks in Github.
- Implementation of IRGAN. 400+ stars in Github.
- Million-level Multi-Agent Reinforcement Learning Platform.
- Multi-agent Reinforcement Learning Paper Collection. 1100+ stars in Github.