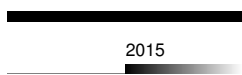


# Tianlin Shi

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📄 timshi.ai

## Education



**Stanford University**, Stanford, CA.

◦ PhD student in Machine Learning.



**Tsinghua University**, Beijing, China.

◦ B.Eng. in Computer Science.

◦ Enrolled in [Yao Class](#), a special pilot CS program led by [Prof. Andrew C. Yao](#) for talented students.

◦ **GPA: 94 / 100. Rank: top 1 / 39** in [Yao Class](#).



**Massachusetts Institute of Technology**, MA, US.

◦ Exchange student, Electrical Engineering and Computer Science (Course VI).

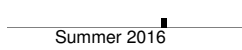
◦ **GPA: 5.0 / 5.0.** Took graduate-level courses: 6.437 inference and information, 6.252 nonlinear programming, 6.816/836 multicore programming.

## Experience



**OpenAI**, San Francisco, CA. *Part-Time Research Intern.*

Launched OpenAI Universe platform. Built the research infrastructure for World of Bits (WoB), and researched RL methods to solve tasks in WoB.



**DJI Research**, Palo Alto, CA. *Research Intern.*

Built and deployed control algorithms for drones to fly autonomously.



**Dropbox HQ**, San Francisco, CA. *Software Engineer Intern - Computer Vision.*

Worked as an intern on the ML team at Dropbox.



**Stanford AI Lab (SAIL)**, Stanford University, Stanford, CA. *Summer Research Intern.*

Worked with Professor [Percy Liang](#) on heterogeneity in probabilistic inference and devised methods that lead to 2-5X speedup for a wide class of structured prediction models.



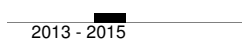
**Computer Science and Artificial Intelligence Laboratory (CSAIL)**, MIT, Cambridge, MA.

Advisor: [Dr. Vikash Mansinghka](#). Contributed to a probabilistic programming system called [Venture](#) and built scalable HMC inference algorithms using automatic gradients.



**Microsoft Research Asia**, Beijing, China.

Mentor: [Thomas Moscibroda](#), Senior Researcher & Research Manager. I developed compressive sensing algorithms to effectively reduce cost of correlated data collection on sensor/social networks, such as air quality indices at different locations in Beijing.



**State Key Lab of Intelligent Tech. and Systems (TNList)**, Tsinghua University, Beijing, China.

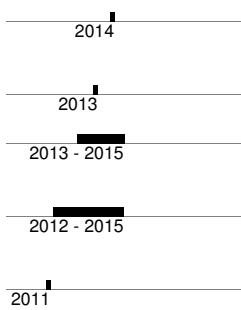
Worked with [Prof. Jun Zhu](#). and proposed streaming Bayesian learning to scaled up max-margin topic models by orders of magnitudes.

## Publications

- [1] [Tim \(Tianlin\) Shi](#), Andrej Karpathy, Jim Fan, Jonathan Hernandez, Percy Liang. [World of Bits: An Open-Domain Platform for Web-Based Agents](#). **ICML 2017**: The 34th International Conference on Machine Learning, Sydney, Australia.
- [2] [Tim \(Tianlin\) Shi](#), Jun Zhu. [Online Bayesian Passive-Aggressive Learning](#). **JMLR** Journal of Machine Learning Research 18 (2017) 1-39. **ICML 2014**: 31st International Conference on Machine Learning, Beijing, China, 2014.
- [3] Chongxuan Li, Jun Zhu, [Tim \(Tianlin\) Shi](#), Bo Zhang. [Max-Margin Deep Generative Models](#). **NIPS 2015**: The 29th Annual Conference on Neural Information Processing Systems.
- [4] [Tim \(Tianlin\) Shi](#), Jacob Steinhardt, Percy Liang, [Learning to Sample in Structured Prediction](#). **AISTATS 2015**: 18th International Conference on Artificial Intelligence and Statistics (Oral).
- [5] [Tim \(Tianlin\) Shi](#), Da Tang, et al. [Correlated Compressive Sensing for Networked Data](#). **UAI 2014**: 30th Conference on Uncertainty in Artificial Intelligence, Quebec, Canada, 2014.
- [6] [Tim \(Tianlin\) Shi](#), Liang Ming, Xiaolin Hu. [A Reverse Hierarchy Model for Predicting Eye Fixations](#). **CVPR 2014**: IEEE Conference on Computer Vision and Pattern Recognition, Columbus, USA.

- [7] [Jian Li, Tim \(Tianlin\) Shi, An FPTAS for Approximating a Sum of Random Variables.](#)  
**ORL:** Operations Research Letters 42.3 (2014): 197-202. Major contributor. Author names under alphabetic order according to CS Theory convention.
- [8] [Tim \(Tianlin\) Shi, Alexey Radul, Vikash Mansinghka, Inference with Automatic Gradients in Higher-Order Probabilistic Programs.](#)  
**NEML:** Workshop at New England Machine Learning Day 2014.

## Honors and Awards



**Gold Medal, Andrew C. Yao Award**, Tsinghua University.

Highest honor for Yao Class students with extraordinary academic achievements.

**Tsinghua-Baidu Scholarship**, Tsinghua University.

**Fellowship of Spark Talents Program**, Tsinghua University.

Among top 50 / 3000 Tsinghua students dedicated to scientific and technological innovations.

**Fellowship of Tsinghua Xuetang Talents Program**, Tsinghua University.

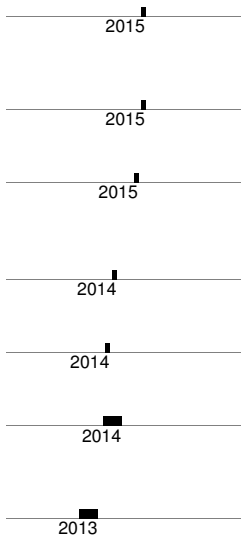
Among top 300 / 3000 newly-enrolled Tsinghua students.

**Gold Medal, China Adolescents Science and Technology Innovation Contest.**

Winner of the biggest national competition for adolescents in science and engineering.

## Programming Experience

Proficient in C++ and Python. Capable of Java, JavaScript, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Julia, Swift, C#, Objective-C, bash, HTML5/CSS3. Familiar with front-end stack and machine learning algorithms. Github: <https://github.com/strin>.



**Cal Hacks 2.0**, UC Berkeley.

Built **Hermes**: an end-to-end itinerary planning and execution bot that could call Uber automatically for users.

**HackGT**, GeorgiaTech.

Built **FlightX**, an app for planning optimal flight itinerary based on user preferences.

**Unique Hack Day**, Wuhan, China.

Built "Hummer": a music game where players could learn singing through playing a game. The game recognizes singing pitches and use them to control a bird.

**HackShanghai: China's largest college Hackathon**, NYU Shanghai.

Built a smart-watch app enabling a fresh way of reading.

**HackPrinceton**, Princeton University.

Built a cooking recipe recommendation system that matches ingredients to recipes.

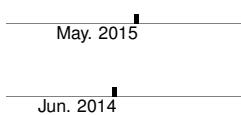
**YaoTalk: A Conversational System for the IIS Domain**, Course Project.

A chat bot based on dialogue systems, speech recognition and web crawlers that help people know about Yao class.

**RayX – RayTracer for Photo-realistic Images and Videos**, Course Project.

A fast ray-tracing software written in C++ 11 [1-min video].

## Invited Talks



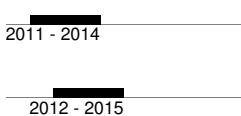
**Learning Where to Sample in Structured Prediction.**

International Conference on AI & Stats 2014. See [slides](#).

**Online Bayesian Passive-Aggressive Learning.**

International Conference on Machine Learning 2014. Available on [techtalk.tv](http://techtalk.tv).

## Services



**China's Welfare Institute Children's Palace**, Shanghai, China.

Advised high-school students to work on challenging programming projects.

**The Association of Student International Communication (ASIC)**, Tsinghua University.

Contributed to Global Village, a yearly event for students from nearly 20 countries to demonstrate their diverse culture. More than 3000 students are involved each year.