

# YIVAN ZHANG

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## EDUCATION

- PH.D. IN COMPUTER SCIENCE, THE UNIVERSITY OF TOKYO** Sep. 2020 – Sep. 2023
- Department of Computer Science, Graduate School of Information Science and Technology
  - Advised by Prof. Masashi Sugiyama
  - Research interests: **Weakly Supervised Learning, Representation Learning, and Transfer Learning**
- M.Sc. IN COMPUTER SCIENCE, THE UNIVERSITY OF TOKYO** Sep. 2018 – Sep. 2020
- Department of Computer Science, Graduate School of Information Science and Technology
  - Advised by Prof. Masashi Sugiyama and Lect. Junya Honda
  - Graduated with **Dean's Award for Outstanding Achievement**
  - Master's thesis: *Machine Learning from Indirect Observations*
- B.ENG. IN INFORMATION SCIENCE, KUMAMOTO UNIVERSITY** Sep. 2015 – Jun. 2018
- Inter-University Joint Degree Program
  - Bachelor's thesis: *An Efficient Implementation of MPS Method for Fluid Simulation*
- B.Sc. IN MATHEMATICS, SHANDONG UNIVERSITY** Sep. 2013 – Sep. 2015
- Bachelor's thesis: *Density Estimation on Riemannian Manifolds*

## EXPERIENCE

- RESEARCH ASSISTANT, NATIONAL INSTITUTE OF INFORMATICS (NII)** Jun. 2021 – Apr. 2022
- JUNIOR RESEARCH ASSOCIATE, RIKEN CENTER FOR ADVANCED INTELLIGENCE PROJECT (AIP)** Apr. 2021 – Apr. 2022
- Generic Technology Research Group, Imperfect Information Learning Team
  - Conduct research in weakly supervised learning and representation learning
- RESEARCH PART-TIME WORKER, RIKEN CENTER FOR ADVANCED INTELLIGENCE PROJECT (AIP)** Apr. 2020 – Apr. 2021
- Generic Technology Research Group, Imperfect Information Learning Team
  - Conducted research in theory, algorithm, and application of weakly supervised learning

## AWARDS

- JST AIP CHALLENGE PROGRAM** Jun. 2021 – Mar. 2022
- Research funding sponsored by Japan Science and Technology Agency (JST)
  - Topic: *Privacy-Preserving Data Collection Protocol Design Based on Characteristics of Aggregate Information*
- MICROSOFT RESEARCH ASIA D-CORE PROGRAM** Jan. 2021 – Dec. 2021
- A collaborative research program provided by Microsoft Research Asia (MSRA)
  - Topic: *Development of Incomplete Information Learning Systems that Predict/Reject with Reasons*

# PUBLICATIONS

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## CONFERENCE

- **Learning Noise Transition Matrix from Only Noisy Labels via Total Variation Regularization** [ICML 2021](#)  
Yivan Zhang, Gang Niu, and Masashi Sugiyama  
Long presentation (top 3%) long presentations : acceptance : submissions = 166 : 1184 : 5513
- **Classification with Rejection Based on Cost-sensitive Classification** [ICML 2021](#)  
Nontawat Charoenphakdee, Zhenghang Cui, Yivan Zhang, and Masashi Sugiyama
- **Learning from Aggregate Observations** [NeurIPS 2020](#)  
Yivan Zhang, Nontawat Charoenphakdee, Zhenguo Wu, and Masashi Sugiyama

## PREPRINT

- **Approximating Instance-Dependent Noise via Instance-Confidence Embedding** [arXiv](#)  
Yivan Zhang and Masashi Sugiyama
- **Learning from Indirect Observations** [arXiv](#)  
Yivan Zhang, Nontawat Charoenphakdee, and Masashi Sugiyama

# TALKS

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- Invited Talk on Aggregate Observations, QuantumBlack, McKinsey & Company [Aug. 2021](#)
- Contributed Talk, ACML2020 Weakly-supervised Representation Learning Workshop [Nov. 2020](#)
- 23rd Information-Based Induction Sciences Workshop [Nov. 2020](#)

# SERVICE

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- Reviewer: ICML 2021, NeurIPS 2021, ICLR 2022, AISTATS 2021, ACML 2021, and workshops
- Organizer: NeurIPS Meetup Japan 2021

# SKILLS

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- Advanced: Python
- Intermediate: C++, Java, R,  $\LaTeX$
- Basic: Haskell, MATLAB/Octave, Mathematica, HTML, CSS

# LANGUAGES

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- Chinese: Native
- English: TOEFL iBT 105/120 (2017)
- Japanese: JLPT N2 (2015)