MASAHIRO KATO

ADDRESS: 9-4-1202 Kamiyama-cho Shibuya-ku Tokyo, 150-0047 Japan.
TELEPHONE: (+81)-90-8551-1848
E-MAIL: mkato.csecon@gmail.com
IT SKILLS: Python, R, Julia, C/C++ , AWS, STATA.
PERSONAL WEB PAGE: https://masakat0.github.io/

■ PROFESSIONAL EXPERIENCE

2020 -   Full-time researcher in economics and statistics, AI Lab, CyberAgent, Inc.

■ EDUCATION

2021 -   **Doctor of philosophy**, University of Tokyo. Advisor: Masaaki Imaizumi.

2017 - 2020   **Master of Computer Science**, University of Tokyo. Advisors: Masashi Sugiyama and Junya Honda.

2013 - 2017   **Bachelor of Economics**, University of Tokyo.

■ RESEARCH INTEREST

High-dimensional statistics, Learning with overparametrized models, Experimental design, Multi-armed bandit problems, Weakly supervised learning, Urban economics.

■ PUBLICATIONS

All papers are published in conference proceedings. ∗ means that I am the first or co-first or corresponding author.

1. Shota Yasui*, and Masahiro Kato*. (*Equal contribution) Learning Classifiers under Delayed Feedback with a Time Window Assumption. In *the International Conference on Knowledge Discovery and Data Mining* (*KDD*), 2022.

2. Masahiro Kato*, Masaaiki Imaizumi, Kenichiro McAlinn, Shota Yasui, and Haruo Kakehi. Learning Causal Models from Conditional Moment Restrictions by Importance Weighting. In *the International Conference on Learning Representations* (*ICLR*, Spotlight 4% 176/3391), 2021.

3. Masahiro Kato*, Kenichiro McAlinn, and Shota Yasui. The Adaptive Doubly Robust Estimator and a Paradox Concerning Logging Policy. In *the Advances in Neural Information Processing Systems* (*NeurIPS*), 2021.

4. Masahiro Kato*, and Takeshi Teshima. Non-negative Bregman Divergence Minimization for Deep Direct Density Ratio Estimation. In *the International Conference on Machine Learning* (*ICML*), 2021.

5. Riku Togashi, Masahiro Kato, Mayu Otani, Tetsuya Sakai, and Shin'ichi Satoh. Scalable Personalised Item Ranking through Parametric Density Estimation. *In the Conference on Research and Development in Information Retrieval* (*SIGIR*), 2021.

6. Riku Togashi, Masahiro Kato, Mayu Otani, and Shin'ichi Satoh. Density-Ratio Based Personalised Ranking from Implicit Feedback. In *the Web Conference* (*WWW*), 2021.

7. Masatoshi Uehara*, Masahiro Kato*, and Shota Yasui. (*Equal contribution) Off-Policy Evaluation and Learning for External Validity under a Covariate Shift. In *the Advances in Neural Information Processing Systems* (*NeurIPS*, Spotlight 3% 280/9054), 2020.

8. Masahiro Kato*, Takeshi Teshima, and Junya Honda. Learning from Positive and Unlabeled Data with a Selection Bias. In *the International Conference on Learning Representations* (*ICLR*), 2019.

■ WORKING PAPERS

∗ means that I am the first or co-first or corresponding author.

• Kaito Ariu, Masahiro Kato*, Junpei Komiyama, Kenichiro McAlinn, and Chao Qin (Alphabetical order). Policy Choice and Best Arm Identification: Asymptotic Analysis of Exploration Sampling. https://arxiv.org/abs/2109.08229. R&R at *Econometrica*.

• Masahiro Kato*, and Kaito Ariu. The Role of Contextual Information in Best Arm Identification. https://arxiv.org/abs/2106.14077. Submitted to *Journal of Machine Learning Research*.

• Masahiro Kato*, Masaaki Imaizumi, Takuya Ishiraha, and Toru Kitagawa. Semiparametric Best Arm Identification with Contextual Information. https://arxiv.org/abs/2209.07330.

• Masahiro Kato*, Masaaki Imaizumi, Takuya Ishiraha, and Toru Kitagawa. Asymptotic Minimax Simple Regret Minimization in Semiparametric Best Arm Identification. Unpublished.

• Masahiro Kato*, and Masaaki Imaizumi. Benign Overfitting in Conditional Average Treatment Effect Prediction with Linear Regression. https://arxiv.org/abs/2202.05245.

- Masahiro Kato*, Masaaki Imaizumi, and Kentaro Minami. Unified Perspective on Probability Divergence via Maximum Likelihood Density Ratio Estimation: Bridging KL-Divergence and Integral Probability Metrics. https://arxiv.org/abs/2201.13127.
- Junpei Komiyama, Kaito Ariu, Masahiro Kato, and Chao Qin. Optimal Simple Regret in Bayesian Best Arm Identification. https://arxiv.org/abs/2111.09885.
- Masahiro Kato*, Kei Nakagawa, Kenshi Abe, and Tetsuro Morimura. Mean-Variance Efficient Reinforcement Learning by Expected Quadratic Utility Maximization. https://arxiv.org/abs/2010.01404.
- Masahiro Kato*, Takuya Ishihara, Junya Honda, and Yusuke Narita. Efficient Adaptive Experimental Design for Average Treatment Effect Estimation. https://arxiv.org/abs/2002.05308.

■ MASTER THESIS

- Adaptive Experimental Design for Efficient Treatment Effect Estimation: Randomized Allocation via Contextual Bandit Algorithm.

■ INTERNSHIP

2019 12 – 2020 04	CyberAgent, Inc.
2019 08 – 09	Preferred Networks
2020	JustInCase
2018 – 2019	RIKEN Advanced Intelligence Project (AIP)
2018 – 2021	Center for Research and Education in Program Evaluation (CREPE), The University of Tokyo
2017 – 2018	Morpho
2017 – 2018	YJFX!

■ SERVICES

Conferences reviewing: ICML (2019 - 2022), Neurips (2020 - 2022), ICLR (2020-2022). AISTATS (2020,2021).

Journals reviewing: Econometrica, TMLR.