

# Curriculum Vitae – Shuheï Watanabe

October 10, 2025

## General Information

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Please check my [GitHub](#) and [homepage](#) for more details of my personal projects. You can also find my research profiles on [Google Scholar](#). Please feel free to contact me via email (shuheï.watanabe.utokyo@gmail.com) if you have any questions.

## Education

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- Oct 2020 – Oct 2023     **University of Freiburg** - Freiburg, Germany.  
Master of Computer Science. Supervisor: Prof. Frank Hutter.  
Overall GPA: 1.1/5.0 (1.0 is the best grade).
- Sep 2015 – Mar 2020     **The University of Tokyo** - Tokyo, Japan.  
Bachelor in Systems Innovation, Faculty of Engineering.  
Break for working at M3 and AIST from Apr 2018 to Sep 2019.  
Overall GPA: 3.78/4.0 (4.0 is the best grade).  
Graduated with **the Best GPA** out of 37 students.
- Apr 2014 – Aug 2015     **The University of Tokyo** - Tokyo, Japan.  
Bachelor of College of Arts and Science, Natural Science 1.

## Employment

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- Jun 2024 – Present     **National Institute of Advanced Industrial Science and Technology (AIST)** - Tokyo, Japan.  
Visiting Researcher of Social Intelligence Research Team.
- Oct 2023 – Present     **Preferred Networks Inc.** - Tokyo, Japan.  
Development of Optuna and support of its internal usage.
- Dec 2020 – Oct 2023     **Machine Learning Lab** - Freiburg, Germany.  
Development of Auto-PyTorch, an AutoML tool.
- Sep 2018 – Sep 2020     **National Institute of Advanced Industrial Science and Technology (AIST)** - Tokyo, Japan.  
Technical Staff (Full-Time) of Social Intelligence Research Team for AutoML Research.
- Apr 2018 – Aug 2018     **M3, Inc.** - Tokyo, Japan.  
Market Researcher and Consultant (Full-Time Internship).  
Genome Business Consulting.

## Awards / Honors

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- Sep 2023    **AutoML 2023 Travel Awards** (500 EURO).
- Aug 2023    **IJCAI-AIJ 2023 Travel and Accessibility Grant Program** (1,000 USD).
- Oct 2022    **NeurIPS 2022 Complimentary Registration** (350 USD).  
Supported by Gaussian Processes workshop organizers.
- Oct 2022    **ELIZA MSc Scholarship** (1,000 Euro/month).  
4 students were selected from the whole Computer Science Master Program in the University of Freiburg.
- Oct 2022    **Deutschlandstipendium** (300 Euro/month).
- Jul 2022    **1st Prize in AutoML2022: Multiobjective Hyperparameter Optimization for Transformers**
- Sep 2020    **ITO Foundation for International Education Exchange**  
(2,000 USD/month for 2 years, AR: 13/193=6.7%).
- Mar 2020    **Hatakeyama Award from the Japan Society of Mechanical Engineers.**  
This award is for the distinctive grades at the mechanical engineering related faculties at the University of Tokyo (AR: 5/340=1.5%).
- May 2019    **PRMU 2018 Yearly Research Encouragement Award.**  
The paper “*Speed Up of Hyper-Parameter Tuning with Nelder-Mead Method by Parallel Computing*” was awarded. 3 papers were selected out of 170 papers. (AR: 3/170=1.8%).
- Oct 2014    **1st Prize in the Freshman Team Hokei in the National Intercollegiate Taïdo Tournament.** Taïdo is one of the Japanese traditional martial arts.

## Selected Publications

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Owing to the space limit, I defer the full list of publications to [my website](#). The acceptance rates are written by "AR: (papers accepted)/(papers submitted)=(percentage)". ○ and ♣ refer to the presenter and the equally contributed authors, respectively.

## Referred Conference Publications

1. ○ **S. Watanabe**, F. Hutter (2023). c-TPE: Tree-Structured Parzen Estimator with Inequality Constraints for Expensive Hyperparameter Optimization. International Joint Conference on Artificial Intelligence (IJCAI) (AR: 644/4566≈14%).
2. ○ **S. Watanabe**, N. Awad, M. Onishi, F. Hutter (2023). Speeding Up Multi-Objective Hyperparameter Optimization by Task Similarity-Based Meta-Learning for the Tree-Structured Parzen Estimator. International Joint Conference on Artificial Intelligence (IJCAI) (AR: 644/4566≈14%).
3. ○ **S. Watanabe**, A. Bansal, F. Hutter (2023). PED-ANOVA: Efficiently Quantifying Hyperparameter Importance in Arbitrary Subspaces. International Joint Conference on Artificial Intelligence (IJCAI) (AR: 644/4566≈14%).

4. ○ ♣ M. Nomura, ♣ **S. Watanabe**, Y. Akimoto, Y. Ozaki, M. Onishi (2021). Warm Starting CMA-ES for Hyperparameter Optimization. AAAI Conference on Artificial Intelligence (AAAI). (AR: 1692/9034=19%).
5. ○ Y. Ozaki, Y. Tanigaki, **S. Watanabe**, M. Onishi (2020). Multiobjective Tree-Structured Parzen Estimator for Computationally Expensive Optimization Problems. The Genetic and Evolutionary Computation Conference (GECCO).

## Preprints

1. ♣ Y. Ozaki, ♣ **S. Watanabe**, T. Yanase (2025). OptunaHub: A Platform for Black-Box Optimization. arXiv:2510.02798.
2. **S. Watanabe** (2023). Tree-Structured Parzen Estimator: Understanding Its Algorithm Components and Their Roles for Better Empirical Performance. arXiv:2304.11127.
3. ○ **S. Watanabe**, Y. Ozaki, M. Onishi (2019). Speed Up of Hyper-Parameter Tuning with Nelder-Mead Method by Parallel Computing. Pattern Recognition and Media Understanding (PRMU). **PRMU 2018 Yearly Research Encouragement Award** (AR: 3/170=1.8%).

## Mentoring & Supervision

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Jun 2024 – Present	<b>Chisa Mori</b> , MSc Student, AIST. Theme: Parallel coordinate plots for multi-objective problems.
Jul 2024 – Present	<b>Kaito Baba</b> , MSc Student, Preferred Networks. Theme: Development of constrained optimization for the Gaussian process-based sampler (Single-objective, Multi-objective).
Aug 2025 – Present	<b>Kaichi Irie</b> , MSc Student, Preferred Networks & AIST. Theme: Development of parallel processing in the Gaussian process-based sampler (Article).

## Certificates

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<b>TOEFL iBT</b>	Total 100 (R: 29, L: 25, S: 22, W: 24) on Jun 2019.
<b>GRE</b>	Q: 168 (Top 7%), V: 152 (Top 46%), W: 4.0 (Top 43%) on Nov 2019.
<b>AtCoder</b>	Highest Rating 1626 (Approx. Top 3.5%)

## Language Skills

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**Japanese** (Native Language), **English** (C1), **German** (B2), **French** (A1).