

# Ryotaro Shimizu

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**Summary** — A lead machine learning research scientist with a Ph.D. in Industrial Engineering and 5+ years of experience driving AI and data analytics initiatives. Combines a strong software engineering foundation with expertise in translating business needs into practical machine learning solutions. Specializes in recommender systems, explainable AI, computer vision, and large language models (LLMs), applying these technologies at scale in real-world applications. Proven leader with experience heading a high-performing ML team (10+ members) and aligning research efforts with production goals. Strong research track record with 50+ publications, including at top conferences (e.g. WWW, ICLR, IJCAI, EMNLP) and multiple awards (including Best Paper and top company performance awards) recognizing exceptional impact.

## Skills

<b>ML/Data Science</b>	Data Mining, Recommender Systems, Explainable AI, Computer Vision, Large Language Models (LLMs), Statistics	Cloud Platform (GCP), MySQL, PostgreSQL, Linux, Tableau
<b>Programming</b>	Python, Java, Go (Golang), Ruby, C++, SQL	<b>Languages</b> Japanese (Native), English (Fluent), Chinese (Intermediate)
<b>Tools/Frameworks</b>	PyTorch, TensorFlow, Docker, Git, Google	

## Experience

**ZOZO NEXT, Inc. - ZOZO Research** Jan 2021 – Present  
*Lead Research Scientist*

- **Applied Machine Learning Leadership:** Joined ZOZO’s R&D institute at its inception and spearheaded collaborative research projects with four universities and one industry partner. Contributed to tripling the institute’s membership and increasing its annual research publication output sevenfold (2020 vs 2024), as the institute’s most active researcher.
- **Cross-Functional Collaboration:** Worked closely with marketing and engineering teams and led applied ML initiatives in ZOZOTOWN (Japan’s largest online fashion e-commerce platform), including developing a dynamic product-thumbnail selection algorithm, direct advertising targeting models, and personalized coupon distribution systems to enhance user engagement and sales. All projects were also presented at academic conferences.
- **Recognition & Team Management:** One of only two employees in company history to win the annual best-performing employee award twice, and the only one from a subsidiary to receive the LINE Yahoo Group Grand Prize (top three out of 28,000+ employees). These honors led to a promotion to lead a 10-member machine learning research team, where I mentor researchers and engineers and oversee a portfolio of high-impact AI projects.

**Waseda University – Institute of Data Science** Oct 2023 – Present  
*Visiting Researcher*

- Supervise a research group of 5–8 members annually and have mentored over 14 undergraduate and master’s students. For three consecutive years, my mentees have graduated at the top of the department. Despite this being a volunteer role, their achievements have consistently outpaced those of students guided by full-time faculty, demonstrating my strong commitment, mentorship, and leadership skills.

**Sophia University** Oct 2023 – Present  
*Part-time Lecturer*

- Designed and taught undergraduate courses on real-world data analysis and Python programming for data science. Emphasized practical skills in data manipulation, statistical modeling, and machine learning. Earned excellent student feedback (4.8/5.0 in 2024) by effectively bridging theoretical concepts with industry applications, thereby improving students’ understanding and job readiness.

**University of California, San Diego - Julian McAuley’s Lab** Jul 2023 – Jul 2025  
*Visiting Researcher*

- Conduct advanced research on recommender systems and large-scale model fine-tuning as a member of a world-class AI lab. Published five papers at international conferences, introducing novel insights in personalized recommendation and efficient large-scale model fine-tuning. Collaborate with global researchers to push state-of-the-art algorithms.

**DeNA, Inc.** Apr 2019 – Dec 2020  
*Software Engineer*

- Developed and maintained a suite of backend services (Java, GCP) for several global mobile game titles, supporting tens of millions of players worldwide. Managed multiple projects and implemented core features including subscription billing systems, virtual currency wallets, user authentication modules, customer support tools, and data collection pipelines.

\* *Early Career Experience:* Gained foundational experience in data analytics and machine learning through internships at **Toreta, Inc. (Jul 2018 – Mar 2019)**, **PKSHA Technology, Inc. (Nov 2017 – Jun 2018)**, and **Azest, Inc. (Nov 2015 – Mar 2017)**. Contributed to developing predictive algorithms and analytics dashboards in these roles, honing skills that paved the way for more advanced ML positions.

## Education

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<b>Waseda University</b>	<b>Apr 2021 – Sep 2023</b>
<i>Ph.D. in Industrial Engineering</i>	<i>Completed program six months early; GPA: 3.9/4.0</i>
<b>Waseda University</b>	<b>Apr 2017 – Mar 2019</b>
<i>M.Eng. in Industrial Engineering</i>	<i>Graduated first in department; GPA: 4.0/4.0</i>
<b>Waseda University</b>	<b>Apr 2013 – Mar 2017</b>
<i>B.Eng. in Industrial Engineering</i>	<i>Graduated in top 10% of department; GPA: 3.3/4.0</i>
<b>Waseda University Senior High School</b>	<b>Apr 2010 – Mar 2013</b>

## Selected Awards & Achievements

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### **ZOZO Group “Souzoh no Nanameue” Grand Prize (Apr 2023) and Runner-up (Apr 2025)**

- One of the top five company-wide annual best-performing employees selected from 1,700+ global employees for outstanding research and business impact.
- Recognized for developing a machine learning system capable of interpreting fashion-specific ambiguous descriptions (e.g., “casual,” “office casual,” “formal”).
- Also honored for proposing a novel task and dataset for explainable recommendations, predicting user preferences before purchase. This work was accepted at a top-tier conference and praised for addressing a critical user-centric challenge in recommendation systems.

### **LINE Yahoo Group “INTERSECTION” Technology Award, Excellence Prize (Nov 2024)**

- Ranked among the top three employees among 28,000+ employees across the corporate group, recognizing exceptional technical innovation.
- Commended by senior executives across the group for the continued development of a machine learning system that interprets fashion-specific ambiguous expressions. The system’s effectiveness and real-world impact garnered significant attention, including coverage by over 70 media outlets.

### **Best Paper Award – International Conference on Computers & Industrial Engineering (Nov 2024)**

- Earned the Best Paper award for research excellence in applying AI to industrial engineering problems.
- Proposed a highly interpretable prediction model capable of outputting the variance of its prediction results.

### **Best Award – Data Analysis Competition, Japan Industrial Management Association (Feb 2024)**

- Won the highest honor at the 37th Annual Conference of the Japanese Society for Artificial Intelligence for an outstanding research contribution.
- Proposed a highly interpretable prediction model capable of outputting the variance of its prediction results.

### **Best Paper/Presentation Award – JSAI Annual Conference (May 2023)**

- Won the highest honor at the 37th Annual Conference of the Japanese Society for Artificial Intelligence for an outstanding research contribution.
- Introduced a fashion image retrieval model that leverages both images and text to improve search relevancy.

### **Research Publications**

- Authored 50+ peer-reviewed publications in machine learning and data science, including papers at premier conferences such as TheWebConf (WWW), ICLR, IJCAI, and ICME. Regularly invited as a reviewer and speaker, reflecting recognized expertise in the field.
- Actively collaborated with domestic and international researchers, leveraging strong communication skills to maintain team alignment. Closely monitored team progress and flexibly filled project gaps as needed, ensuring successful research collaborations.

### **Media Coverage**

- 100+ news articles and press releases (e.g., Nikkei, Nikkei Robotics, FNN, university-affiliated publications) have featured my research and projects, highlighting their significance in both academic and industry contexts.