

Takuya Kitazawa

- M.S. in Information Science and Technology, specialized in recommender systems and scalable machine learning.
- Industry experience as a full-stack software engineer, OSS developer, data scientist, machine learning engineer, and product manager.
- Productizing machine learning and data analytics in both B2C and B2B domain, by not only implementing the systems but also translating real-life problems into technical requirements.

Work

- 2022/09 – Present **Freelance Software Developer**
Self-employed in BC, Canada
Working on data & AI ethics and machine learning productization.
- 2021/08 – 2022/08 **Software Development Engineer - Personalization**
[Amazon](#), Vancouver, BC, Canada
Worked full-stack on Amazon's "Buy Again" repeat purchase recommender system, including its frontend components and backend data pipelines.
- 2020/10 – 2021/08 **Senior Product Manager**
2021/02 – 2021/08 [Treasure Data \(Canada\)](#), Vancouver, BC, Canada
2020/10 – 2021/02 [Treasure Data](#), Tokyo, Japan
- Served a product management role in the digital marketing, data analytics, and machine learning domain. Product features I was in charge of include: out-of-the-box data visualization, A/B testing, and predictive customer scoring.
 - Productized solution templates in an in-house [Treasure Boxes](#) ecosystem to [accelerate advanced, strategic use of rich customer data](#). I have also worked closely with the business development team to [collaborate with the partners](#) and develop the platform together.
- 2020/02 – 2020/09 **Product Manager**
2019/04 – 2020/01 **Staff Engineer**
2018/08 – 2019/03 **Senior Engineer**
[Arm](#), Tokyo, Japan
- (Spin-off [Treasure Data](#) as an independent organization)
- As an engineer:
- Evangelized the connection of big data, machine learning, data science, and IoT, both for company's internal and external audiences.
 - Worked closely with an internal sales engineering team and served as a data science consultant to accomplish clients' machine learning projects in a wide variety of industries, including retail, gaming, and online media.
 - Represented individual contributors in Arm's data business unit, and mapped out granular IoT-data integrated use cases and solution ideas through prototyping and customer-facing work with global teams.
 - Led the development of a [brand-new Python SDK](#) for an enterprise big data analytics platform, and renovated the surrounding data science ecosystem.
- As a product manager:
- Worked with multi-regional cross-functional teams, and continuously delivered marketer-facing features in an enterprise customer data management platform by bridging the communications among internal/external and technical/non-technical stakeholders.
 - I was particularly responsible for product development and strategy establishment in the applied machine learning and customer data analytics domain, and we have successfully [recognized as "Strong Performer" in The Forrester Wave™: Customer Analytics Technologies, Q3 2020](#).
 - Led a collaborative project with Arm Research, an Arm's internal research-

Contact

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Personal

🏠 1993/02/25, Nagano, Japan
🏠 North Vancouver, BC, Canada (Permanent Resident of Canada since June 2022)
❤️ Traveling, running, hiking

Skills

🔧 Unix, Linux, Windows, AWS, Docker, Git, MySQL, PostgreSQL, MongoDB, Fluentd, Apache Spark, Hadoop, Hive, and Airflow
</> Python, Julia, Java, Scala, Ruby, JavaScript (Node.js, TypeScript, React, d3.js, Angular), PHP, MATLAB, Swift, C, C++
🗣️ Japanese (native), English (IELTS Academic Overall 7.0 in Feb 2020, General Training Overall 7.5 in Feb 2021)

Publications

Conference Talks

- 📷 T. Kitazawa. [Apache Hivemall Meets PySpark: Scalable Machine Learning with Hive, Spark, and Python](#). ApacheCon Europe 2019.
- 📷 T. Kitazawa and M. Yui. [What's New and Coming to Apache Hivemall: Building More Flexible Machine Learning Solution for Apache Hive and Spark](#). ApacheCon North America 2019.
- 📷 T. Kitazawa. [Recommendation.jl: Building Recommender Systems in Julia](#). JuliaCon 2019.
- 📷 T. Kitazawa. [Apache Hivemall: Query-Based Handy, Scalable Machine Learning on Hive](#). ODSC Europe 2018.
- 📷 T. Kitazawa. [FluRS: A Library for Streaming Recommendation Algorithms](#). EuroSciPy 2017.

International Conference, Workshop, and Demo Papers (referred)

- 📷 T. Kitazawa. [Zero-Coding UMAP in Marketing: A Scalable Platform for Profiling and Predicting Customer Behavior by Just Clicking on the Screen](#). Adjunct Publication of the 27th Conference on User Modeling, Adaptation and Personalization (UMAP 2019).
- 📷 T. Kitazawa and M. Yui. [Query-Based Simple and Scalable Recommender Systems with Apache Hivemall](#). Proceedings of the 12th ACM Conference on Recommender Systems (RecSys 2018).
- 📷 T. Kitazawa. [Sketching Dynamic User-Item Interactions for Online Item Recommendation](#). Proceedings of the 2017 Conference on Conference Human Information Interaction and Retrieval (CHIIR 2017).
- 📷 T. Kitazawa. [Incremental Factorization Machines for Persistently Cold-starting Online Item Recommendation](#). The 1st Workshop on Profiling User

oriented group, and published a [novel solution template for data-driven multi-touch attribution](#).

2017/02 – 2018/07 Data Science Engineer

[Treasure Data](#), Tokyo, Japan

(Acquired by [Arm](#))

- Regularly contributed to the development of [Apache Hivemall](#), a scalable machine learning library running on Apache Hive and Spark.
- Led the development of [out-of-the-box machine learning applications](#) from competitor analysis and requirement gathering to system implementation and customer onboarding.

2015/08 – 2016/06 Part-time Software Engineer

[Rakuten Institute of Technology](#), Tokyo, Japan

In the research organization, I have worked on the development of recommendation algorithms for an online golf booking service. Based on a [previous study](#), I have conducted further assessments and proposed improvement ideas in terms of both theory and practice.

2012/02 – 2013/02 Part-time Software Engineer

[HANASAKE PICTURES](#), Fukushima, Japan

Contributed to the development of (1) PHP applications for an avatar-based social networking service, and (2) an iOS application for virtual trial fitting using an image blending algorithm named [Poisson Image Blending](#).

2011/10 – 2013/03 Part-time Research Assistant / Web Developer

[The University of Aizu](#), Fukushima, Japan

Led the development of a Ruby on Rails-based web application "Aizu Weather" for regional weather monitoring, accompanied by interactive geospatial data visualization using d3.js.

Education

2015/04 – 2017/03 M.S. in Information Science and Technology

[The University of Tokyo](#), Tokyo, Japan

Thesis: Persistently Cold-Starting Online Item Recommendation for Implicit Feedback Data

Advisor: Dr. Takayasu Matsuo

GPA: 4.0

Activities:

- Served as a student volunteer at [RecSys 2016](#) (Sep 2016)
- Participated in [Machine Learning Summer School Kyoto 2015](#) (Aug 2015)

Internship:

- R&D Intern at [Silver Egg Technology](#) (Dec 2016 – Jan 2017)
 - In-depth data analysis on customer's purchase dataset collected from a real-world e-commerce service.
 - Proposing a [novel recommendation algorithm](#), which has been a part of my master's thesis, to achieve higher accuracy of recommendation in the long run.
- Machine Learning Intern at [Treasure Data](#) (Aug – Sep 2016)
 - Implementing user-defined functions (UDFs) for state-of-the-art recommendation and anomaly detection techniques on [Apache Hivemall](#).
 - PoC implementation of a [next-generation anomaly detection system](#) for multiple system metrics, collected from an enterprise big data management platform.

2011/04 – 2015/03 B.S. in Computer Science and Engineering

[The University of Aizu](#), Fukushima, Japan

Thesis: User Modeling in Folksonomies: Relational Clustering and Tag Weighting

Preferences for Dynamic Online and Real-Time Recommendations (RecProfile), in conjunction with RecSys 2016.

- 📄 T. Kitazawa and M. Sugiyama. [User Modeling in Folksonomies: Relational Clustering and Tag Weighting](#). Proceedings of the 5th International Conference on Web Intelligence, Mining and Semantics (WIMS 2015).

Japanese Domestic Conference Papers (non-referred)

- 📄 T. Kitazawa. Incremental Item Recommendation Using a SVD-based Streaming Anomaly Detection Framework (in Japanese). Numerical Analysis Symposium 2016 (NAS 2016), June 2016.
- 📄 T. Kitazawa. [Incremental Factorization Machines for Item Recommendation in Data Streams](#). The 30th Annual Conference of the Japanese Society for Artificial Intelligence (JSAI 2016), IC2-5, June 2016.
- 📄 T. Kitazawa and T. Matsuo. [Incremental Approaches for Matrix Approximation: Performance Evaluations and Their Possible Applications](#) (in Japanese). The Japanese Society for Artificial Intelligence SIG-FPAI-98, Aug 2015.
- 📄 T. Kitazawa and M. Sugiyama. [User Modeling through Relational Clustering on Folksonomy](#) (in Japanese). The 77th National Convention of Information Processing Society of Japan (IPSJ 2015), 3N09, Mar 2015.
- 📄 T. Kitazawa and M. Sugiyama. [Relational Clustering in Social Bookmark](#). Tohoku-Section Joint Convention of Institutes of Electrical and Information Engineering, 2A05, Aug 2014. [IEEE Sendai Section Student Awards: The Best Paper Prize](#)

Courses and Certifications

- 🌟 [Foundations of Humane Technology](#), Center for Humane Technology, Apr 2022.
- 🌟 [Driving business towards the Sustainable Development Goals](#), Erasmus University Rotterdam, Coursera, Apr 2021.
- 🌟 [Global Environmental Management](#), Technical University of Denmark, Coursera, Apr 2021.
- 🌟 [Renewable Energy and Green Building Entrepreneurship](#) (with honors), Duke University, Coursera, Apr 2021.
- 🌟 [Blockchain Specialization](#), University at Buffalo, Coursera, Apr 2021.
- 🌟 [Supply Chain Analytics](#), Rutgers Business School, Coursera, Apr 2021.
- 🌟 [Supply Chain Management Specialization](#), Rutgers Business School, Coursera, Apr 2021.
- 🌟 [UI / UX Specialization](#), California Institute of the Arts, Coursera, Aug 2020.
- 🌟 [Finance for Non-Finance Professionals](#), Rice University, Coursera, May 2020.
- 🌟 Introduction to User Experience Design, Georgia

Advisor: Dr. Masahide Sugiyama

GPA: 3.97

Honors and Awards:

- President's Award — Summa Cum Laude equivalent (2015)
- Dean's List of Distinguished Students (2012 – 2015)
- [Best Paper Prize, IEEE Sendai Section Student Awards](#) (2014)
- [Innovative Award, The Tokyo American Center and Keio SFC Entrepreneurship Seminar and Business Plan Competition](#) (2012)

Activities:

- Served as a teaching assistant in a Numerical Analysis course, and taught Java coding of numerical methods to 20+ undergraduates (Fall 2014)
- Participated in [Security and Programming Camp 2011](#) to deepen knowledge in web security (Aug 2011)

Institute of Technology, Coursera, May 2020.

- [Functional Programming in Scala Specialization](#), École Polytechnique Fédérale de Lausanne, Coursera, May 2020.
- [Applying Machine Learning to your Data with GCP](#), Google, Coursera, Sep 2018.
- Introduction to Recommender Systems, University of Minnesota, Coursera, Oct 2016.
- Machine Learning, Stanford University, Coursera, June 2014.
- Applied Information Technology Engineer Examination, Information-technology Promotion Agency (IPA), Japan. Passed in 2010, with a pass rate of 20.3% (8,592 out of 42,338).