

# Takuya Kitazawa

- MSc 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 British Columbia, Canada

Helping individuals and businesses (mostly small-scale, up to 150 people) to efficiently, effectively, and ethically productize data as an analytics pipeline, ML/NLP model, and customer-facing applications. Provided services include but are not limited to:

- Full-stack software engineering
- Data science, analytics, and machine learning consultation
- Product management and application development
- Mentoring, teaching, and writing

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

## Contact

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 GitHub [github.com/takuti](https://github.com/takuti)  
 LinkedIn [linkedin.com/in/takuti](https://www.linkedin.com/in/takuti)

## Personal

🏠 Nagano, Japan  
 🏠 Vancouver, BC, Canada (Permanent Resident of Canada since June 2022)  
 ❤️ Traveling, running, hiking

## Skills

Listing the ones I recently used for a meaningful amount of time but not limited to:

🔧 Unix, Linux, Google Cloud, AWS, Docker, Git, MySQL, PostgreSQL, 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 7.5 in Nov 2022, General Training Overall 7.5 in Feb 2021)

## Publications

Conference Talks (proposal reviewed)

📄 T. Kitazawa. [Recommendation.jl: Modeling User-Item Interactions in Julia](#). JuliaCon 2022.

📄 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](#). ODS 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).

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-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](#).

📄 T. Kitazawa. [Incremental Factorization Machines for Persistently Cold-starting Online Item Recommendation](#). The 1st Workshop on Profiling User 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 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](#)

See [Google Scholar](#) for a complete list of publications.

## Courses and Certifications

- [Machine Learning on Google Cloud Specialization](#), Google Cloud, Coursera, Sep 2022.
- [Indigenous Canada](#), University of Alberta, Coursera, June 2022.
- [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 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

- 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

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)

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).