

Takuya Kitazawa

- 10+ years of experience at start-up, Big Tech, and as an independent, with a master's degree in Information Science and Technology specializing in recommender systems and scalable machine learning.
- On a mission to strengthen our lives in the information-rich world, which has led my career into full-stack application development, data science & analytics, machine learning productization & operationalization, and product management.
- Empathy as a core value, allowing me to serve different scales and verticals of B2C/B2B business across the globe (e.g., e-commerce, gaming, online media, supply chain), contribute to open-source and research communities, and mentor fellow developers.

Work

2023/08 – Present Information and Communication Technology Advisor

[Mzuzu Entrepreneur Hub](#), Mzuzu, Malawi

CR .NET Digital Marketing

As a Canadian international volunteer from [World University Service of Canada](#), I promote equitable access to ICT in Malawi, a small landlocked country in southeast Africa, through digital skills training for young people and capacity building at the local social enterprise.

2022/09 – Present Freelance Software Developer Self-employed in British Columbia, Canada

Python Google Cloud Apache Beam Data Engineering Natural Language Processing

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 development
- Mentoring, teaching, and writing

2021/08 – 2022/08 Software Development Engineer - Personalization [Amazon](#), Vancouver, BC, Canada

TypeScript Scala Python AWS Apache Spark Apache Airflow Recommender Systems

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

Python Data Visualization Predictive Modeling Digital Marketing Product Management

- 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)

Contact

- hello@takuti.me
- linkedin.com/in/takuti
- calendly.com/takuti

Basic Information

- Nagano, Japan
- North Vancouver, BC, Canada (Permanent Resident of Canada since June 2022)
- Traveling, running, hiking
- Japanese (native), English (professional proficiency; IELTS Academic Overall 7.5 in Nov 2022, General Training Overall 7.5 in Feb 2021)

- GitHub
- Google Scholar

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](#). ODSC Europe 2018.
- T. Kitazawa. [FluRS: A Library for Streaming Recommendation Algorithms](#). EuroSciPy 2017.

International Conference, Workshop, and Demo Papers (peer-reviewed)

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

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-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)

Java Apache Hive Apache Spark Ruby on Rails

- 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

Python PHP Recommender Systems

In the research organization, I have worked on the development of recommendation algorithms for an online golf booking service. Based on a **baseline 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

Objective-C PHP Image Processing

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

Ruby on Rails Data Visualization GIS

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

Master of Information Science and Technology

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-refereed)

- ▶ 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

Additional skills and knowledge I can demonstrate in the field of:

📖 Arts, Humanities & Social Sciences

- ▶ **Introduction to Logic and Critical Thinking**, Duke University, Coursera, May 2023.
- ▶ **Introduction to Philosophy**, The University of Edinburgh, Coursera, Apr 2023.
- ▶ **Indigenous Canada**, University of Alberta, Coursera, June 2022.

🌳 Public Health, Environmental Management & Sustainability Development

- ▶ **Food Sustainability, Mindful Eating, and Healthy Cooking Specialization**, Stanford University, Coursera, Apr 2023.
- ▶ **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.

📁 Business

- ▶ **Supply Chain Analytics**, Rutgers Business School, Coursera, Apr 2021.
- ▶ **Supply Chain Management Specialization**, Rutgers Business School, Coursera, Apr 2021.
- ▶ **Finance for Non-Finance Professionals**, Rice University, Coursera, May 2020.

✍️ UI / UX Design

- ▶ **UI / UX Specialization**, California Institute of the Arts, Coursera, Aug 2020.
- ▶ **Introduction to User Experience Design**, Georgia Institute of Technology, Coursera, May 2020.

💻 Computer Science & Software Engineering

- ▶ **Machine Learning on Google Cloud Specialization**,

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

Degree credential: [WES Verified International Academic Qualifications](#)

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.

Google Cloud, Coursera, Sep 2022.

- ▶ [Foundations of Humane Technology](#), Center for Humane Technology, Apr 2022.
- ▶ [Blockchain Specialization](#), University at Buffalo, Coursera, Apr 2021.
- ▶ [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.
- ▶ 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).
- ☼ Others
 - ▶ Wilderness First Aid & CPR/AED Level C, Canadian Red Cross, Certificate# 104256780, issued on July 9, 2023 (expires on July 8, 2026).
 - ▶ PADI® Open Water Diver, certified on October 16, 2023.
 - ▶ Mountains 101, University of Alberta, Coursera, Aug 2021.

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](#), a multi-day group training program in computer security (Aug 2011)