Hokuto Kagaya

[Website](#) *(Includes the links to some social media profiles)*

Summary

- Had 7+ years experiences as a professional software engineer. Covered broad range of software engineering; close communication with non-tech cohorts, managing projects as a technical lead, designing a high-level system architecture and hands-on work.
- Made internal/external sessions as an experienced developer, which include 3 talks at the company-official developer conferences.
- Majored in computer science, especially applied machine learning. Had 2 peer-reviewed publications in some international academic conferences, one of which has 320+ citations.

Work Experience

Part-time software engineer: *Preferred Infrastructure / Preferred Networks*, 2014 - 2015

- Worked as an internship and a part-time R&D engineer, and used C++, Python.
- As an internship engineer, I proposed a novel method to estimate where human's head is from an image and proposed a deep learning based method to estimate which direction a head sees (mean error of angle: about 33 degree). The final presentation of the internship (2014) is [here](#) (written in Japanese).
- Plus, focused on image detection, surveillance video analysis with some computer vision techniques as a part-time engineer.

Software Engineer: *LINE Corporation*, Apr. 2016 - Oct. 2022

- Software Engineer / Tech Lead, LINE Game Platform Division, 2016 - 2019
  - Developed our large-scale applications with Java, Kotlin, Javascript, Python, covering software architecture design with HBase, Redis, Elasticsearch and/or Kafka.
  - Developed and managed a game platform used by 80+ games developed by 60+ partner companies (as of 2017). Especially I focused on new functionalities to provide a place for user communication, like in-game BBS, user review aggregation. A part of my work can be seen in [this presentation](#).
  - Was also in charge of PjM for some data-oriented features on our platform (since 2018 later).

- Software Engineer, LINE Business Data Platform Development Division, 2019 - present
  - Developed some essential and advanced features of DMP (Data Management Platform), which is one of the core functionalities of modern online advertisement techniques, with Java, Go, JavaScript, Python. My job includes high-level architecture design as well.
  - LINE DMP has 200B+ records about custom audiences (as of 2021). I'm taking a lead especially for novel features to manage such large-scaled data across multiple B2B produces owned by LINE and Z Holdings.
  - Covered knowledge regarding related laws (Protection of Personal Information) through discussion with legal / security team in the company. Also, conducted some surveys and made internal presentation about recent techniques proposed by other platforms like Google/Apple.
  - Drove multiple projects as a "Project Tech Lead" through communication with planning teams, other involved dev teams, infra and DB teams etc.
  - A part of my work can be seen in some presentations ([1](#), [2](#), [3](#)).

Software Engineer: *SmartNews, Inc.*, Nov. 2022 - present

- Software Engineer / Tech Lead, 2022 -
  - Developed a brand-new system to handle contents related to the new businesses.
  - Leaded any technical communication and decision-making as a tech lead.

- TBD

Education

B.E., *The University of Tokyo*, Japan, Mar 2014

M.A.S., *The University of Tokyo*, Japan, Mar 2016

- Majored in computer science, and my research interest was especially computer vision on food.
- Conducted several researches on food recognition with Deep Learning (Convolutional Neural Network, CNN) and image metadata.
- Published two peer-reviewed papers on international conferences and five papers on domestic conferences. One of my work that contains researches conducted when I was a **bachelor** student is accepted in the top international conference in multimedia domain, ACM Multimedia. That paper has 320+ citations as of Nov. 2023.

Skills

- Programming Languages
  - Java, Kotlin, Python, JavaScript/TypeScript (Had experiences at work)
  - C++, C, Ruby, Perl, Go (just had experiences in education / hobby coding)
- DB / Middlewares
  - Elasticsearch, HBase, Redis, MySQL, Apache Kafka
  - AWS-specific: Kinesis, SQS, DynamoDB, S3
- Other technical topics that I'm familiar with
  - git-based development (w/ GitHub)
  - Web development with Spring Boot, nginx
  - Provisioning and CI with Ansible, Jenkins
  - Server-side development with CentOS, Ubuntu, Docker (Kubernetes)
  - Others: Prometheus + Grafana, DataDog (monitoring), Hadoop Ecosystem (Hive with Tez, Presto, Apache Spark), Kibana, Computer vision basics
- Natural Languages: Japanese (native), English (professional working proficiency), Korean (casual conversation)

Publications

[Google Scholar](#)

- International Conferences (peer-reviewed)
  - <u>Hokuto Kagaya</u>, Kiyoharu Aizawa, Makoto Ogawa; **Food Detection and Recognition Using Convolutional Neural Network**, ACM Multimedia 2014 pp.1085-1088, Nov. 3-7, 2014, Orlando, FL.
  - <u>Hokuto Kagaya</u>, Kiyoharu Aizawa; **Highly Accurate Food/Non-Food Image Classification based on a Deep Convolutional Neural Network**, 1st International Workshop on Multimedia Assisted Dietary Management (In conjunction with the 18th International Conference on Image Analysis and Processing), pp.350-357, Sep. 8 2015, Genoa, Italy.
- Domestic Conferences + Technical Reports
  - 6 publications
- Presentations at work (You can see presentation on my website above)
  - LINE Developer Day 2017/2018 (for LINE GAME Platform) and 2020 (for LINE DMP)
  - LINE Developer Meetup #66 (for LINE DMP)
  - Multiple Hiring events (incl. for students and experienced developers)