

EXPERIENCE

- **Mercari, Inc.** Tokyo, Japan
Software Development Engineer, Search Platform Dec. 2023 – Present
 - **Managing Elasticsearch cluster:** Managing Elasticsearch clusters serving searching features in Mercari.
- **Amazon** Vancouver, Canada
Software Development Engineer, Adaptive Transportation Optimization Service (ATROPS) Sep. 2021 – Nov. 2023
 - **Serialization optimization:** Drilled down one major serialization logic and proposed solutions for optimization. This project is ongoing but has already improved performance in specific case from 5+ hours to 5 minutes.
 - **Validation rules performance optimization:** Optimized two major validation rules by removing duplicated calls using caching. Reduced validation time by 70% for major use cases.
 - **ATROPS Config Management Team:** Our team is developing and operating tools for automating the modeling of transportation networks. I solved a number of problems by working as a subject matter expert (SME) for a project that expands the scope of the automation to the business level, collaborating with external teams.
- **NAVER Corp.** Seongnam, South Korea
Software Engineer, Big Data & AI Platform Sep. 2018 – Sep. 2021
 - **DevOps Logiss:** Logiss is an ELK stack for large scale search logs. It consisted with six clusters of over 1000 nodes deployed in Korea/Japan region.
 - **Logstash performance optimization:** Testing and profiling Logstash on log-pipelining system. More than 100% improvement on throughput by adjusting GC parameters and Grok timeout.
- **NEXON Korea** Seongnam, South Korea
Software Engineer, Data Infrastructure Development Team, Intelligence Labs Jan. 2017 - Aug. 2018
 - **NxLog converter:** Converts JSON file to structured Apache Parquet format. This app has automatic schema detecting and updating system. Fully dockerized and auto-scaled on AWS.
 - **Fluentd optimization:** Optimized Fluentd on log-pipelining system by profiling and adjusting the app/kernel parameters. With RSS(Receive Side Scheduling), About 30% improvement on throughput is achieved
 - **Fluentd TCP monitoring plugin:** Developed monitoring plugin which shows TCP connection metric with event count per source address
- **ITRI (Industrial Technology Research Institute)** Hsinchu, Taiwan
Intern, CCMA (Cloud computing Center for Mobile Application) Jul. 2014 - Aug. 2014
 - **Auto-ballooning:** Implemented auto-ballooning in QEMU-KVM. Performance testing was also completed.

EDUCATION

- **Ulsan National Institute of Science and Technology (UNIST)** Ulsan, South Korea
M.S. in Computer Science and Engineering (CSE) Mar. 2015 – Feb. 2017
- **Ulsan National Institute of Science and Technology (UNIST)** Ulsan, South Korea
B.S. in Computer Science and Engineering (CSE) Mar. 2011 – Feb. 2015

PUBLICATIONS

- **Jaewon Kwak, Eunji Hwang, Tae-kyung Yoo, Beomseok Nam, and Youngri Choi** "In-memory Caching Orchestration for Hadoop", In Proceedings of the 16th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGRID 2016)
- Youngmoon Eom, Jinwoong Kim, Deukyeon Hwang, **Jaewon Kwak**, Minho Shin, Beomseok Nam "Improving Multi-dimensional Query Processing with Data Migration in Distributed Cache Infrastructure", 21st IEEE International Conference on High Performance Computing (HiPC 2014)

AWARDS

- *Finalist*, HPCAC-ISC 2014 Student Cluster Challenge Jun. 2014
- *Finalist*, Asia student Supercomputing Challenge Apr. 2014
- *Finalist*, Asia student Supercomputing Challenge Apr. 2013