

WORK EXPERIENCE

Meta, Software Engineer

May 2022 - Present

- Technical leader of metadata team on distributed Warm Storage (a.k.a. Tectonic) having 100EB+ and 70 trillion queries/day.
- Supported **Meta's GenAI (LLaMA 3/4)** with flash, and unblocked 96K GPU model training on checkpoint and data loading congestions by developing request prioritization and root-causing/fixing P100 tail latencies. Also ran power efficiency program for better GPU training capacity in data centers.
- Led various Metadata projects for scalability, reliability, and efficiency; regional-scale metadata storage project (20EB per cluster) to achieve 10x horizontal scalability, multi-tenancy overload protection for metadata's critical resources (DB shard limit, CPU, capacity), file API SLO program and improved its P99 latency SLO by 66%.
- Developed core features/fixes across dependencies; obtained 20x vertical scale for open file operation, improved client's RPC strategy, fixed ZippyDB's inconsistent results on coalescing workflow, improved daily statistics landing time by 75%, batched traffic from GC components to reduce overload in Zippy, etc.

Amazon, Software Development Engineer II

Nov 2019 - Mar 2022

- Led integration of automated vendor negotiation system into an organization-wide vendor data analysis platform. Clarified business/technical requirements with counterparts and developed/designed seamless UX/UI with backends. Resolved technical challenges such as latency reduction with Elasticsearch to fulfill SLAs and multi-threading to optimize workflow.
- Designed and implemented the multiple components across the team – user permission system with simple/scalable onboarding mechanism, notifier for negotiation status updates, tracking system for customer agreements to prove actions, dynamic term selection for negotiators to choose the order of negotiating terms with validating correctness, etc.

Kakao Corporation, Software Engineer / Researcher

Aug 2016 - Nov 2019

- Developed hundreds of petabyte scale distributed file system (Tenth2). Primarily worked on file metadata storage component on HBase that recovered lost storage items, developed usage statistics reporting system, and reformed meta structure to achieve better consistency. Also designed a fast cold storage migration system that reduced 33% storage size.
- Developed 2-layered distributed file caching service serving 20M+ QPS (20K+ QPS/host). Optimized multi-threaded lock logic with a bloom filter to prevent slowdown from overloaded contents, increasing speeds by 300%. Designed a regex cache invalidation system, reducing the fluctuation of IO performance by 80%.
- Led building company-wide coding interview guidelines and ran new interviewer onboarding sessions. Set programming questions for batch SWE candidates and took/reviewed 60+ real-time programming interviews as senior interviewer.

Industry Research Projects

Funded by **Samsung Electronics** — Concolic Testing for Detecting Bugs in Bio-processor S/W**Jun 2015 - May 2016**Funded by **LG Electronics** — Test Case Generation Framework for Detecting Bugs in Home Appliance S/W**Feb 2015 - Sep 2015**

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Republic of Korea**Sep 2014 - Aug 2016***Master of Science in School of Computing*

Thesis: Coverage Improvement of Concolic Testing by Optimizing Symbolic Array Index Operations

Advisor: Professor Moonzoo Kim

Chung-Ang University, Seoul, Republic of Korea**Mar 2011 - Aug 2014***Bachelor of Science in Computer Science and Engineering (Summa Cum Laude)*

PUBLICATIONS

Yunho Kim, **Taejin Kim**, Moonzoo Kim, et al., *Effective Integer Promotion Bug Detection Technique for Embedded Software*, Journal of KIISE: Software and Applications, Vol. 43, Num 6, Jun 2016**Taejin Kim**, Moonzoo Kim, et al., *Detecting Integer Promotion Bugs with Embedded Software using Static Analysis Technique*, Korea Computer Congress, Dec 17-19, 2015 (**Best Paper Award**)

SKILLS

C++ Python Java C Multi-Threading/Processing AngularJS Ansible HBase Concolic Testing Clang/LLVM OOP Git Agile
AWS DynamoDB S3 SNS SQS Lambda Step Functions ElasticSearch