

EUNWHA PARK

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Summary

Backend Engineer at Samsung Electronics with 3+ years of experience architecting high-traffic distributed systems. Led a **zero-downtime migration** of **78B+ rows (50TB+)** across **3 global regions**, eliminating **\$2.2M/year** in database costs. Specialized in Java/Spring, distributed databases (Cassandra, DynamoDB), and cloud-native infrastructure on AWS/EKS.

Professional Experience

Backend Software Engineer

Jan 2023 - Present

Samsung Electronics

Database Migration (ClustrixDB→DynamoDB + Cassandra)

- Led a **zero-downtime migration** of **78B+ rows (50TB+)** across **3 global regions**, achieving **100% data integrity** via a hybrid cutover strategy using dual write, shadow read, and per-user flag routing.
- Reduced database operating costs by **95% (\$2M+/year)** by replacing ClustrixDB with a polyglot persistence architecture (DynamoDB + Cassandra).
- Redesigned the legacy RDB schema into a **DynamoDB single-table model**, reducing critical-path DB access from **4 calls to 1** and cutting DB operations by **75%**.

Query Offloading (ClustrixDB→Cassandra)

- Cut **\$700K+/year** in infrastructure costs by migrating write-heavy workloads to Cassandra, reducing RDB write load by **50%** and lock wait times by **68%** globally at **18k+ QPS**.

IAM Modernization

- Redesigned a **10-year legacy IAM monolith** into a **DDD-based modular architecture**, introducing a multi-tier UID system to reduce potential PII exposure and enable decoupling of **10+ downstream services**.

Batch Platform & EKS Migration

- Optimized batch processing for a **56M+ user platform**, achieving up to **61% runtime reduction** by right-sizing thread-pool configurations and eliminating critical OOM errors in production.
- Orchestrated **VM-to-EKS migration** across multiple regions and implemented S3-based distributed coordination to eliminate **DynamoDB hot-partition risks**, slashing incident MTTR from minutes to seconds.

Open-Source Contributions

Apache Zeppelin (Open Source Contribution Program)

2025

- **Awarded Grand Prize (1st place)** for delivering the most impactful technical contributions among all participating teams.
- Led refactoring of **core components**, resolving **10+ issues** to improve code quality, security, and system reliability, resulting in successful upstream merges.

Kubernetes Website

- Localized core Kubernetes documentation to Korean to enhance accessibility for global developers.

Technical Skills

Languages: Kotlin, Java, Python

Cloud & DevOps: AWS (Certified Solutions Architect – Professional), Kubernetes, Docker, Jenkins, GitHub Actions

Backend & Data: Spring Boot, Hexagonal Architecture, DDD, Apache Cassandra, Amazon DynamoDB, MySQL, Apache Kafka, Amazon S3

Education

University of Illinois Urbana-Champaign | Master of Computer Science (MCS)

Incoming Fall 2026

Expected May 2028 | Returning to school after Summer 2027

Kyungpook National University | B.S. in Mobile Engineering, GPA: 4.45/4.50

Mar 2019 - Feb 2023

- Exchange Student at Lakehead University and Yale University Summer Session.

CERTIFICATIONS

AWS Certified Solutions Architect - Professional