Seogyu Kim

Seoul, South Korea

asap0208@gmail.com | sayu.day | Backend Engineer | Distributed Systems Specialist

EDUCATION

Kyonggi University   Suwon, South Korea
B.A. in Korean Language & Literature / Business Administration   *Mar. 2013 – Feb. 2020*

42 Seoul   Seoul, South Korea
Software Engineering (Peer-to-Peer Learning Program)   *Jan. 2020 – Jan. 2021*

TECHNICAL SKILLS

Languages: Go, Python, Rust, TypeScript, SQL
Frameworks: FastAPI, LangGraph, Echo, NestJS
Databases & Storage: PostgreSQL, MongoDB, Redis, OpenSearch (Vector DB)
Infrastructure: Kubernetes, AWS, Helm, ArgoCD, Grafana/Prometheus

EXPERIENCE

KB Securities (AI Tech Team)   Seoul, South Korea
Manager (Backend Engineer)   *Sep. 2025 – Present*

- Reduced E2E data processing latency by **80% (15m to 3m)** by engineering a parallelized document parsing pipeline utilizing PyMuPDF4LLM.
- Improved retrieval relevance for financial risk analysis by architecting a **Hybrid Search system** (Dense Vector + BM25) with **RRF (Reciprocal Rank Fusion)** reranking on OpenSearch.
- Decreased parsing error rate from **50% to under 10%** by designing a resilient multi-agent workflow with automatic fallback mechanisms using LangGraph.

42dot (Hyundai Motor Group)   Seoul, South Korea
Blockchain Platform Engineer   *May 2023 – Sep. 2025*

- Achieved **1,500 TPS** write throughput per instance for an off-chain storage engine by implementing a custom Go-based architecture with Merkle Tree verification and Reed-Solomon Erasure Coding.
- Reduced boilerplate code by over **50%** for internal teams by developing a generic Indexer SDK in **Rust**, featuring a gRPC stream extractor and BCS decoding engine.
- Enabled **O(1) state retrieval** for massive blockchain datasets by implementing a dual-table strategy (History/Snapshot) within the indexing architecture.

Coinone   Seoul, South Korea
Backend Engineer (Wallet Team)   *Feb. 2022 – May 2023*

- Eliminated double-spending risks by implementing **Idempotency Key patterns** across the deposit and withdrawal microservices.
- Reduced deposit/withdrawal failure rate from **10% to less than 0.1%**, significantly cutting operational costs by optimizing the Node.js transaction processing logic.
- Achieved **zero concurrency incidents** in staking services by introducing a Message Queue architecture to enforce strict transaction ordering.
- Led the migration of legacy JavaScript projects to a type-safe **NestJS (TypeScript)** environment, improving code maintainability.

The Future Company   Seoul, South Korea
Backend Developer   *Mar. 2021 – Feb. 2022*

- Optimized geospatial data retrieval performance by implementing **R-tree indexing** and polygon operations using PostGIS for a metaverse land trading platform.
- Enhanced system scalability by decoupling the monolithic architecture into microservices for Payment, Auth (OAuth 2.0), and Order Matching.

Hongik University (Visual Communication Design)   Seoul, South Korea
Freelance Backend Developer   *Aug. 2020 – Feb. 2021*

- Built and deployed the official department website (Archive, Exhibition) using **Python Django** and PostgreSQL, handling high-resolution media data.
- Established a scalable cloud infrastructure using AWS (EC2, S3, RDS, Route53) with Nginx and SSL security configurations.