

# Kim Seogyu

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## PROFESSIONAL SUMMARY

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### Backend Engineer

- **Core Competencies:** Distributed System Design, High Availability (HA) Architecture, Concurrency Handling, and Consistency Verification.
- **Key Tech Stack:** Go, Python, Rust, TypeScript (NestJS).
- **Infrastructure:** Kubernetes (EKS), AWS.
- **Domain Experience:** Crypto Exchange (Wallet/Staking), Blockchain Core (L2/Indexer), Securities Firm (RAG/AI).

## WORK EXPERIENCE

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### KB Securities

2025.09 – Present

*AI Tech (Manager)*

#### Document Parser API

- **Stack:** Python, LangGraph, FastAPI, PostgreSQL, OpenSearch, Docker
- **Document Parsing Engine:**

- Implemented OCR and PyMuPDF-based parsers for financial document structuring, and LLM/Rule-based TOC extraction features.
- Designed LLM / Hybrid Search (Dense Vector(KNN)+ BM25(Match)) + RRF architecture to improve search performance.

#### Risk Review Agent

- Designed LangGraph-based Multi-Agent workflows (Routing, Fallback).
- Reduced response time from 15 mins → 3 mins range by introducing parallel processing and pre-processing batches.
- Identified architectural issues and implemented solutions, reducing the error rate from 50% → under 10% and shortening the beta launch period.

### 42dot (Hyundai Motor Group)

2023.05 – 2025.09

*Blockchain Platform Team*

#### Off-chain Distributed Storage & Indexer SDK

- **Stack:** Go, Rust, MongoDB, Redis Streams, gRPC
- **Storage Engine (offchain-db-v3):**
  - Conducted case studies on Celestia (DA) and Ceph for integrity assurance logic.
  - Secured **1,500 TPS** write performance for a single instance and applied Reed-Solomon EC.
  - Validated data integrity using `go-ethereum` based Merkle Tree calculations.
- **Indexer SDK (Rust):**
  - Designed a generic ETL engine (Extract: gRPC Stream, Transform: BCS Decoding).
  - Implemented O(1) state lookup using a History/Snapshot dual table strategy.
  - Established standard indexing patterns for internal blockchain services (reduced Boilerplate code by 90%).

## Coinone

2022.02 – 2023.05

*Wallet Team*

### Crypto Wallet System & Staking Architecture

- **Stack:** Node.js, TypeScript, NestJS, PostgreSQL, Redis
- **Deposit/Withdrawal System:**
  - Introduced Idempotency Key pattern for deposit/withdrawal transactions.
  - Reduced deposit/withdrawal failure rate from 10% → under 0.1%.
  - Refactored multiple legacy Javascript projects into a defined NestJS-based common template.
- **Staking Service (Plus 2.0):**
  - Identified system defects through technical reviews and resolved issues directly.
  - Maintained zero operational incidents after service launch.
- **Node Operation:**
  - Operated over 10 mainnet nodes (including Bitcoin, Ethereum) and developed wallet middleware.
  - Contributed to preemptive issue resolution through continuous community tracking.

## The Future Company

2021.03 – 2022.02

*Backend Developer*

### Metaverse Land Trading Platform

- **Stack:** ExpressJS, PostGIS, Redis
- **Geospatial Engine:** Implemented virtual land polygon calculations and R-tree indexing using PostGIS + Turf.js.
- **Microservices:** Developed payment, authentication (OAuth), and order execution engines.

## SKILLS

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- **Languages:** Go, Python, Rust, TypeScript, SQL
- **Frameworks:** FastAPI, Echo, NestJS, LangGraph
- **Database:** PostgreSQL, MongoDB, Redis, vectorDB (FAISS/OpenSearch)
- **DevOps:** Kubernetes, Helm, ArgoCD, Gitlab, Grafana/Prometheus, AWS