

# Jongkook Kim

gaulbi@gmail.com

Paramus, NJ

## Professional Experience Summary

- **Over 20 years of expertise** in architecting, designing, and implementing multi-tier and single-tier applications within Financial Institutions.
- **10 years of leadership** in software development team management, specializing in remote working environments.
- **Proficient in Java, Spring Boot, Kafka and RESTful Web Services** with extensive hands-on experience. **Skilled in automation** with tools such as Ansible, Bash, TypeScript, and Python. **Strong background in CI/CD tools** like JIRA, Git, SVN, Jenkins, Bitbucket and TeamCity.
- **In-depth knowledge of Big Data technologies** such as Hadoop, HDFS, HBase, Impala, Hive, Solr, Sentry, and Ranger.
- **Solid understanding** of OOP, design principles, and microservices architecture.
- **Experienced with observability tools** including Open Telemetry, Prometheus, Grafana, Alert Manager, Loki and Jaeger.
- **Expert in software authentication and authorization** using SAML, JWT, and 2-Way Authentication.
- **Familiar with Generative AI concepts and tools**, including RAG, Agentic AI, vector databases, and fine-tuning techniques — gained through personal study, coding practice, and experimentation in local environments.

## PROFESSION EXPERIENCE

### Morgan Stanley – Core MF & Retirement Tech

#### Lead Software Engineer

Nov 2021 - Present

#### Responsibility

- **Led the modernization of a legacy mainframe-based retirement platform**, transitioning to distributed, cloud-native architectures to significantly enhance system **resiliency, high availability, scalability, and elasticity**, supporting 24/7 mission-critical financial operations.
- **Directed cross-functional teams** of developers and engineers (on-site and offshore), conducting architecture and design reviews, enforcing code quality standards, and delivering **secure, high-performance backend systems** for financial advisor (FA) and customer-facing applications.
- **Partnered with product and business stakeholders** to assess feasibility, define scope, and deliver features that improved user experience and operational efficiency across Morgan Stanley and E\*Trade platforms.
- **Designed and implemented distributed microservices** with low-latency, high-throughput performance, handling millions of transactions daily and ensuring seamless integration with existing infrastructure.
- Successfully **retired COBOL-based components**, reducing mainframe dependency and achieving a projected **35% cost reduction by 2025**.
- Championed **observability and reliability engineering**, deploying telemetry dashboards with OpenTelemetry, Grafana, Prometheus, and Jaeger to monitor and optimize application performance and response time.
- Leveraged **Kafka, Spring Boot, SQL, and containerized deployments** to build scalable APIs used by internal mobile and web applications, including Morgan Stanley's 3D and MSO platforms.
- Led the design and development of a Python-based generative AI solution using the OpenAI SDK to compare outputs from legacy and new services, enabling rapid detection of data discrepancies and improving validation accuracy.

**Engineer Specialist/Engineering Lead Analyst**

Sep 2011 – Nov 2021

**Responsibility**

- Led architecture of Citi's global **Hadoop, Kafka, Solr onboarding platform**, automating access provisioning, workspace creation, and resource policies across 20+ clusters.
- Integrated onboarding with **enterprise ticketing systems**, standardizing big data access for hundreds of project teams while enforcing platform governance.
- Defined and implemented **data security and access controls** using Sentry and Ranger, aligning with internal compliance and external regulatory requirements.
- Spearheaded a **zero-downtime OS upgrade across 6,000+ Red Hat servers** supporting big data clusters, leveraging Ansible, Bash, and Python for orchestration.
- Developed reusable automation frameworks for **platform upgrades, provisioning, and environment refreshes**, reducing manual effort and operational risk.
- Designed and deployed a **custom log monitoring system** replacing Xpolog, enabling real-time alerting through HBase and event-driven pipelines.
- Led cross-functional teams in developing scalable ingestion pipelines, advising on **data schema optimization, ingestion flow design**, and cost-efficient processing.
- Provided architectural guidance to engineering and product teams on big data design patterns, analytics use cases, and infrastructure alignment.
- Technologies: Java, Python, Ansible, Kafka, Hadoop, Hive, Solr, Ranger, Cloudera, HBase, Linux, Git, Bitbucket

**UBS AG**

**System Developer**

Mar 2007 – Mar 2011

**Responsibility**

- **Architected and integrated a middleware platform** connecting FirstData's remote deposit system with UBS's internal bookkeeping systems, enabling real-time clearing and reconciliation of millions of transactions and reducing processing times from days to minutes.
- **Designed and developed multi-tier enterprise web applications** using Java, Spring MVC, and JQuery, including the Letter of Understanding (LOU) platform for Financial Advisor recruitment and compensation workflows.
- Led development of a **digital approval and signature capture system** to replace paper-based fund transfer processes, improving operational efficiency and reducing compliance risks.
- Developed reporting and compensation management tools used by branch officers and home office, integrating Excel output via Apache POI and dynamic web UIs.
- Delivered reusable Java components and refactored legacy integration flows, enabling easier system maintainability and faster onboarding of financial products.
- Technologies: Java, Spring MVC, Apache POI, WebSphere, Web Services (SOAP), JSP, JavaScript, JQuery, AJAX, Sybase, FirstData APIs

## Nomura Securities, Inc.

### Consultant

Apr 2006 – Mar  
2007

#### Responsibility

- Reengineered legacy loan data processing systems by migrating Sybase stored procedures to a modular Java/Hibernate application, improving scalability and maintainability.
- Redesigned the in-house logging framework using Log4j, increasing system observability and simplifying troubleshooting across critical applications.
- Designed and implemented dynamic reports using JasperReports and iReport, streamlining compliance reporting.
- Technologies: Java, Hibernate, Sybase, Log4j, iReport, JasperReports, JSP, HTML, JavaScript

## FIS – Credit and Collection

### Java Developer

Nov 2003 – Apr 2006

#### Responsibility

- Enhanced and maintained a collection and reporting platform using J2EE (EJB, JSP, Servlets) and Struts, supporting multi-database (Oracle, SQL Server) environments and multiple application servers (WebSphere, WebLogic, JBoss).
- Optimized legacy data handling logic to improve performance and reliability in large-scale financial reporting workflows.
- Technologies: Java, J2EE, Struts, JSP, Servlets, Oracle, SQL Server, WebSphere, WebLogic, JBoss

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## PROFESSIONAL DEVELOPMENT

- Conducted self-directed study on Generative AI topics including embedding techniques, vector databases (ChromaDB, PostgreSQL with pgvector), and prompt engineering workflows.
- Gained hands-on experience with various AI framework, such as CrewAI, AutoGen, LangChain and LangGraph.
- Explored Retrieval-Augmented Generation (RAG) and agentic AI concepts through hands-on experiments using local LLMs and open-source tools.

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## CERTIFICATE/ EDUCATION

### AWS Solution Architect – Associate

Jan 2020

### Fairleigh Dickinson University (Computer Science – M.S)

3.98/4.0

May 2002