

CHARLES VONNESS

Senior Backend Engineer ○ 25 Years Building Scalable Java & Kotlin Systems ○ Microservices · AWS · Spring Boot

○ Woodbridge Township, NJ ○

PROFESSIONAL SUMMARY

Lead Software Engineer with 25+ years of experience architecting and delivering scalable, enterprise-grade backend systems — including an event-driven ad tracking platform processing **200M+ daily impressions**. Deep expertise in **Java, Kotlin, Spring Boot, and AWS** with a proven record of technical leadership, system architecture, and driving cost and performance improvements. Retained through **three successive company acquisitions** as a key technical asset. Recognized as a go-to engineer for Sev-1 incident response and resolution, and a hands-on mentor who has championed technology adoption (Kotlin), conducted ~100 technical interviews, and guided teams of 3–5 developers across architecture, design, and delivery.

TECHNICAL SKILLS

Languages & Frameworks: Java, Java 21, Kotlin, Spring Boot, Spring Framework, Hibernate, JPA

Architecture & APIs: Microservices, RESTful APIs, Event-Driven Architecture, Message Queuing (Kafka, JMS, SQS, SNS, ActiveMQ)

Cloud & Infrastructure: AWS (EC2, ECS, RDS, S3), GCP, Docker, Kubernetes, CI/CD, Maven, Git

Data & Storage: PostgreSQL, Oracle (PL/SQL), MySQL, SQL, MongoDB, Redis

Practices & Tools: Agile/Scrum, Incident Management, JIRA, JUnit, Mockito, Linux, FIPS Compliance, Prompt Engineering, Cursor AI, GitLab Duo

PROFESSIONAL EXPERIENCE

Lead Software Engineer

Aug 2024 – Mar 2026

Amnet Digital (Consultant for Iron Mountain) | Woodbridge, NJ (Remote)

- Engineered core backend features for Iron Mountain's Digital Experience Platform (DXP) — serving both commercial and federal clients (including the IRS) — including encryption, folder/asset management, search, and security modules using Java 21, Spring Boot, Maven, and AWS.
- Performed prompt engineering to parse and extract IRS document data, then proposed and built a POC for an LLM-to-code-generation pipeline that replaced direct LLM parsing with generated Python code — improving determinism, reducing cost, and accelerating execution. POC was approved by upper management for production development.
- Ensured FIPS compliance across the platform by integrating Chainguard Docker images, BouncyCastle for FIPS-certified encryption, and enterprise-level secret management via Akeyless.
- Ramped up on Kubernetes, GCP, Redis, MongoDB, and Kafka within the first 90 days, becoming a productive contributor to the platform's scalability and real-time data capabilities.
- Accelerated team development velocity by leveraging AI-assisted development tools (Cursor AI, GitLab Duo) and mentored junior developers through code reviews and technical guidance on a team of ~15 engineers.

Lead Software Engineer

Mar 2022 – May 2024

MarketCast (acquired Phoenix Marketing International) | Remote, NJ

- Led a team of 3–5 developers to integrate AI services (OpenAI via internal API gateway) into a Survey Authoring Tool, automating TV show-related survey question generation and reducing manual authoring time.
- Architected and developed scalable backend applications using **Java, Kotlin, and Spring Boot** with RESTful APIs on AWS (EC2, ECS, RDS, PostgreSQL), supporting core media research and analytics.
- Participated in all technical hiring interviews and provided technical leadership on Java and Kotlin best practices, collaborating with cross-functional teams to align deliverables with business goals.

Principal Software Developer

Jan 2019 – Mar 2022

Phoenix Marketing International (acquired Nielsen's ad effectiveness division) | Remote, NJ

- Solely designed and engineered the entire backend infrastructure for the Ad Snapshots analytics platform in ~3 months — hundreds of endpoints, dozens of database tables — using Kotlin and Spring Boot with RESTful APIs. Platform enabled clients to build custom ad performance dashboards, drill into airing details, and compare ad spend efficiency.
- Championed Kotlin adoption across the organization by self-learning the language, running developer training sessions, and presenting benefits to management — highlighting JVM/Java interoperability and reduced boilerplate as key advantages.
- Collaborated daily with product leadership, QA, and DevOps to translate business requirements into technical stories, broke down architecture into implementable tasks for junior developers, and consistently delivered on schedule.
- Mentored junior developers and participated in all technical interviews (~100 across Nielsen, Phoenix, and MarketCast), serving as a primary evaluator for engineering hiring decisions.

Senior Software Developer II

Apr 2008 – Jan 2019

Nielsen Company (acquired IAG Research) | Oldsmar, FL / New York, NY

- Co-architected and co-led development of **PopRewards**, designing the system architecture and database schema for a consumer survey portal processing **10K–30K daily panelist sessions** for Nielsen's core ad effectiveness research.
- Built and maintained OTIF, an event-driven ad tracking system processing ~200 million impressions per day using JMS, ActiveMQ (later SQS), and PostgreSQL — matching ad exposures to panelists for targeted survey delivery.
- Served as a primary responder on Sev-1 production incidents, frequently diagnosing root causes and directing resolution efforts. Led a war-room review of the data warehouse ETL pipeline, analyzing PL/SQL, schema design, indexes, and triggers to resolve critical throughput bottlenecks.
- Led migration from on-premise infrastructure to **AWS cloud-hosted environments** as a major contributor over a ~6-month initiative. Created comprehensive architecture documents and database models as part of acquisition due diligence.

Software Developer → Senior Software Developer

Jun 2001 – Apr 2008

IAG Research | New York, NY

- Built and extended the Data Management System (DMS), a Java Swing desktop platform used by ~100 researchers daily to manage TV show and advertising data and create surveys.
- Developed the RewardTV consumer survey portal — a high-traffic platform that later evolved into Nielsen's PopRewards system after acquisition. Co-designed the architectural foundation and database schema that carried forward across multiple platform generations.
- Began development of the **OTIF ad tracking system** (event-driven, ~200M daily impressions), establishing the initial architecture and message queuing patterns that scaled through the Nielsen era.
- Authored internal documentation, API guides, and application wikis that became team-standard onboarding and reference materials.

EARLIER CAREER

Application Developer | Webmind Inc. (formerly Intelligenesis Corp.) | New York, NY | Jun 1999 – Apr 2001

Integrated a machine learning text classification engine into a production-ready Java application, building the backend and client layers that productized the core ML technology into a distributed client-server system. Also built a real-time stock market analysis tool that classified newsgroup messages and computed composite indices using distributed processing (RMI, JDBC, SQL).

PERSONAL PROJECTS

Kraken Rebalancer

2025 – Present

Autonomous Cryptocurrency Portfolio Rebalancing Engine | [REDACTED]

- Designed and built a production-grade, autonomous portfolio rebalancing engine for the Kraken exchange using **Java 25, Spring Boot 4, and React 19** — running live managing a real portfolio for several months.
- Implemented intelligent rebalancing algorithms including dynamic fiat deployment (adjusts cash allocation based on portfolio drawdown), automated deposit/withdrawal detection, and configurable deviation thresholds.
- Built a real-time React dashboard with live portfolio monitoring, allocation charts, trade history, and hot-reload configuration — demonstrating full-stack delivery beyond backend specialization.
- Enforced engineering rigor with **95%+ test coverage** (JUnit 5, Mockito, JaCoCo enforcement), comprehensive documentation (ALGORITHM.md, CONTRIBUTING.md, SECURITY.md), and open-source best practices.

EDUCATION

Bachelor of Science in Computer Science

College of Staten Island, The City University of New York (CUNY)

WHAT COLLEAGUES SAY

"An outstanding architect, developer and team leader with a proven track record of delivering quality products on-time or ahead of schedule... THE go-to person for complex technical issues and new products. His vast technical knowledge and ability to instantly pick up new languages/disciplines makes him a true asset to any organization."

— **Kelly Golden, SVP Technology Services, MarketCast (managed Charles for 15+ years)**

"A top-tier developer, highly skilled in Java... his ability to conceive and execute solutions was matched only by his dedication to a collaborative, innovative work environment. I wholeheartedly recommend him for any team seeking an accomplished and respected developer."

— **John Kim, Senior UI Developer at PMI (reported directly to Charles for 18+ years)**