**Greg Trester**

**Senior Software Engineer – Java Backend**

**262.844.5641 | gregallentrester@gmail.com**

**Objective**

On a project basis, ideate/design/code/test Cloud-native applications utilizing Java 8, Spring Boot, Microservices, Domain Driven Design precepts in a quality-oriented, cost-effective way.

**Career Summary**

• Remote FTE for two years, based in San Jose, California

• 15+ years of experience encompassing Spring Boot, Java 8, Cloud-native

• NYC subway (MTA) Web Services, saving $3M/week in debit card transactions

• Saved $250,000 in fees by automating installation of HA Web Appliances

• Strong Microservices concepts: DDD, SAGA, Bounded Contexts

• Project Roles: Principal Engineer, Lead Dev, Mentor, Coach, Agile/SAFe

• Strong interpersonal, risk analysis/mitigation, consensus-building skills

**Excellent References and Code Catalog Available Upon Request**

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**Capital One Chicago Senior Java Software Engineer (consult) Feb/20 – May/20**

Integrating Kafka Producers with extant Cloud-native (AWS) RESTful Spring-boot Microservices for Bass Pro Shops/Cabela’s. Refactoring Kafka client to configure using the 12-Factor App approach. Exploring Hashicorp’s Consul/Vault as a further enhancement to the 12-Factor App approach to Docker Containerization.

Writing Slack Webhook for real time microservice alerts to supplement embedded monitoring (Spring Actuator and resilience4J). This saves an annualized expenditure of $1M in support staffing.

**Ascension Health Chicago Lead Java Software Engineer (consult) Jun/19 – Dec 19**

Authoring Cloud-native (PCF/GCP) RESTful Microservices for Clinicians, Doctors, Nurses. Writing a service that ingests CSV files into MySQL. Writing several APIs that leverage Swagger, HATEOAS, SonarQube, Google OpenID Connect OAuth2. Using Spring Boot JPA Repositories, MongoDB Atlas, Flyway to monitor app’s data evolution in its nascent stages of development. CI/CD occurs via Jenkins Pipeline, Build Packs.

**FTD Chicago Senior Java Software Engineer (consult) Mar/19 – Jun/19**

Lift-Shift Cloud-native Order Management System (OMS) using Docker, Kubernetes, Conductor (orchestration), and Elastic Search, Swagger, on Google Cloud Platform. Writing a Spring Data JPA/MongoDB Repository Spring Boot Microservice that removes duplicate order transactions. CI/CD via Jenkins Pipeline.

**BMO Harris Chicago Lead Java Software Engineer (consult) May/18 – Mar/19**

Developing Spring Boot Microservices that accept heterogeneous data codices, leveraging Consul Templates. Designing/developing an Event-Sourcing message bus w/ performance of 20-ms latency @ 300 concurrent users.

Evaluating OpenShift (Docker/Kubernetes) versus Pivotal Cloud Foundry (PCF) Cloud-native platforms. Designing/developing custom event overflow buffer using NIO2/Channels.

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**TMSW Chicago Cryptographic Java Engineer (consult) Mar/18 – Mar/18**

Authoring an app that provisions 300,000,000 (300M) unique, cryptographically-secure game stamps for McDonalds on a 5-minute on-demand basis (for testing). The generated game stamps are hashed using a HMAC routine, inserted into InfluxDB timeseries database. The PRNG implementation leverages either Linux device: /dev/urandom or the /dev/random.

**Bank of America Chicago Senior Java Software Engineer (consult) Sep/17 – Feb/18**

As part of a 5-member Agile/SAFe team, prototyping a Netflix OSS-based Enterprise-wide Java 8 Microservices Configuration Portal on Pivotal Cloud Foundry (PCF) Cloud platform. Effort involves utilizing Domain-Driven Design to identify Bounded Contexts for a Lift/Shift of extant Data Stores.

**Market News International Chicago Lead Java Software Engineer Dec/16 – Sep/17**

Designing/coding/testing Analytics Profiler w/ 50 nano-second latency which profiles a machine-trading app that intercepts UDP packets. The Analytics Profiler correlates Metamako-switches equipped with Endace FPGA-cards (ERF-PCAP files) with Nanotick CME Trades/Asks/Bids (CSV files).

Additionally, converting streamed Datagram Packets via Pcap4j (a Java 8 libpcap wrapper) to data-at-rest (Influx time-series database). Writing Bash scripts to ingest (via rsync) CME’s CSV files (sent by Nanotick), then applying selection/projection logic to CSV CME payload.

**Sabbatical Pro bono, freelance work Aug/16 – Dec/16**

Transition to Chicago due to high cost of living in California, wife’s career advancement.

**Symantec/Veritas Mountain View CA Principal Java Software Engineer Dec/15 – Aug/16**

Saving $250,000 in professional services per installed HA Web Appliance by evolving RESTful Web Service (API) architecture. The focus is on Scalability/Data Consistency/Survivability of the SOA 2.0-based cURL business logic tier. This SOA 2.0-based Web Appliance houses NetBackup, runs on VxFS (file system licensed to HP-UX).

Writing an abstraction layer for Co-Pilot that provides instant recovery for Oracle databases (leveraging ASM, RMAN), using Jackson/JSON, Google’s JSONParser.

**Capital One San Francisco CA Senior Java Software Engineer (consult) Jun 15 – Dec 15**

Developing key RESTful Web Microservices (APIs) for a customer-facing Open Account Online (OAO) for small business loan applicants. This SOA/SaaS application conforms to regulatory standards: PCI and Sarbanes-Oxley. Also, writing RESTful services that connect to the Federal Office of Foreign Assets Control (OFAC), LexisNexis.

**Comcast/NBC Universal Sunnyvale CA Lead Java Engineer (consult) Nov/14 – Jun 15** Ideating/designing/developing/testing RESTful APIs to fulfill Campaign/customer requests at a rate of 10,000 requests/second. This app inventories customer hardware in real time for Campaign upsells to XFINITY. Calibrating HAProxy to manage a 2-6 node cluster to handle bursts of 70,000 concurrent users.

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**VISA Foster City CA Senior Java Software Engineer (consult) May/14 – Oct/14**

For Visa Checkout, writing Spring RESTful web services (APIs) to expose business logic. Designing/writing a Jackson-based JSON parsing module to transform data from XML. Writing a custom HTTPS Client leveraging Digital Certificates for a payment gateway using a Producer/Consumer model for transaction monitoring/arbitrage.

**Ascentis San Mateo CA Lead Java Software Engineer (startup) May/13 – Mar/14**

On a capitalized SaaS project, designed/writing key architectural components for an HCM application. Writing an Effectivity Engine: a Low-latency, in-memory journaling app using ConcurrentSkipListMap. Leveraging Interceptor Design Pattern (an asynchronous Servlet Filter) to enforce Authorization business rules. Tomcat 8 instance affords real time response to logging config changes (via PropertyConfigurator, DOMConfigurator).

**DexMedia Santa Clara CA Lead Java Software Engineer Jun/12 – May/13**

Improving ClickStreamEvaluator, the system of record, by reducing persistence from 300 ms. to 16 ms. Facilitating asynchronous database calls by leveraging Spring’s NamedParameters. Addressing scalability, identifying data-race conditions in the persistence tier. Writing custom core processing code by leveraging Executors, FutureTask, ThreadFactory.

**E\*Trade Menlo Park CA Principal Java Software Engineer Jan/11 – Jun/12**

Optimizing existing multi-tenancy architecture using Hibernate/Spring. Optimizing Oracle SQL queries by eliminating orphaned SQL connections in the C3PO connection pool. Identifying factors contributing to memory leaks: ClassLoaders, Listeners, Singletons, HashMaps, ThreadLocals. Addressing issues with Spring Batch that impact the ingesting of new client’s metadata. Identifying and mitigating concurrency, security, scalability vulnerabilities. Conduct root-cause analysis of deployment stability issues and identified factors such as memory leaks in the Bytecode Instrumentation (Proxy) libraries: CGLIB, ASM. The pervasiveness in the code base necessitated a hardware fix: installing a 24-core server.

**Wells Fargo San Francisco CA Java Software Engineer (consult) Mar/10 – Dec/10**

Designing/developing the Navigation/Business Logic Tier for a Loan Management application. Using Spring DAOs injected into Controllers and Custom JSP tags. This Tree/Data-Grid renders 700 rows/second, had column sorting, instantaneous pagination, and a JSON payload.

**First Web Group Palo Alto CA Principal Java Software Engineer (startup) May/09 – Mar/10**

Designing/developing a multi-tenant SaaS revenue-tracking app as a system of record for Affiliates such as Google, Yahoo. Architecture: Spring DAOs injected into Controller, Hibernate Conversations. Web Services (APIs) allowing real-time B2B data exchanges. The Clustered Tomcat 6 environment handles 10K transactions per second. SQL-injection exploits mitigated via Named Queries.

**Expression Diagnostics (XDx) Brisbane CA Senior Java Software Engineer (startup) Mar/08 – Nov/08**

Developing architectural template to streamline AlloMap molecular expressions into an actionable test score. Templates allow XDx to support other clinical trials by streamlining every aspect of the core business. The annual cost savings of $100K. Mentoring junior developers to rapidly complete an application that transfers encrypted patient info over SSH to Columbia Hospital (NYC).

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**PC World San Francisco CA Senior Java Software Engineer (consult) Oct/07 – Jan/08**

Converting an IDG website from ASP to STRUTS2 architecture as a template for other IDG websites by leveraging Core Java 5, SQL, Reflection, STRUTS2, JSPs, Servlets, Threads, SAX parser, iBATIS, Agile.

**Metavante San Jose CA Senior Java Software Engineer Jul/04 – Oct/07**

With Metavante’s partner, New York City subway (MTA) designed and developed on Web Services that saves $3,000,000/week in debit card transactions. These services use Axis and CXF to track debit card transactions for subway riders' fares. Metavante’s revenue stream from this collaboration is roughly $30,000/week. Developing a configurable STRUTS2-based financial web site for Metavante (a financial service bureau). The site administers FSA, HSA accounts for Metavante’s partners: Walgreens, Humana, and WageWorks.

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**Certifications**

Sun-Certified Java Programmer

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**Education**

Computer Information Systems/Programmer Analyst A.A.S. MATC, Mequon, WI

Graduated 1995 with a 4.00 G.P.A Phi Theta Kappa

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**Concepts**

Microservices, spring Boot, Agile/SAFe, Bounded Contexts, Cloud-native (PCF/GCP) [OpenShift, Kubernetes, Docker], Domain-Driven Design, Reflection/Introspection, TDD, BDD, CI/CD, RESTful Web Apps (APIs), Microservices, Encrypt/Decrypt, HATEOAS, Design Patterns [ßuilder, Interceptor, Listener, Law of Demeter, SOLID], Event-Sourcing/LMAX, Disruptor.

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**Standards/Governance**

LexisNexis, HIPAA, PCI, Sarbanes-Oxley, Federal Office of Foreign Assets Control (OFAC).

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**Security**

HMAC (keyed-hash message authentication code), java.security.Providers, implementing PRNG entropic/chaos implementations: /dev/urandom for SecureRandom.getInstanceStrong(), /dev/random for SecureRandom()

**Technology**

SOA 2.0, SaaS, Datagram Packets, Digital Certificates, JDBC, JSON, Java 8, Reflection/Introspection, Async Servlets/Filters [via PropertyConfigurator, DOMConfigurator], NIO Channels, Async Java 8, Memory-mapped Files, Hibernate Conversations, Spring RESTful Web Services, Spring Boot JPA Repositories, Spring Boot Microservices, Spring Data, JPA/MongoDB Repository, NamedParameters, CentOS 6.8, MacOS X (Catalina), VxFS (the file system licensed to HP-UX), Metamako switches, Endace FPGA cards.

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**Frameworks**

Spring Boot, Java 8, G-Suite, Google OpenID Connect OAuth2, PuTTY, Linux, Ribbon, Gradle 4.5, Maven 3.6, HAProxy, HTTPSClient, resilience4J, Spring Actuators, InfluxDB (a time-series datastore), IntelliJ, Atom, Jackson, JSTL, Slack (Webhooks), SoapUI, SonarQube, Splunk, Swagger, Mockito, JUnit, TestNG, NIO2/Channels, TICK Stack, Telegraf, InfluxDB, Chronograf, Kapacitor, RabbitMQ, MongoDB Atlas, MySQL 8, Stored Procedures, Named Queries, Pivotal Cloud Foundry (PCF), Oracle SQL, NetBeans, NetflixOSS [Conductor, Eureka, Ribbon, Zuul, Hystrix], Hashicorp Consul/Vault, Tomcat 8, CXF (Apache), Axis2, amCharts, Bash (sed tr, cut, awk), Bouncy Castle, Endace FPGA card, Metamako switch, Git, Google Charts, Google Cloud Platform.

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**Tools**

OpenShift, Bash, Flyway, Elastic Search, Elastic Stack, Eureka, Docker/Kubernetes, JSP Taglibs (custom), Jenkins Pipeline/BuildPacks, cURL, libpcap/pcap4j, Pcap4j, Fusion, MySQL, Oracle, MongoDB, Atlas (MongoDB Cloud Service), Hystrix, Zuul, Eureka, Ribbon, rsync, UDP packets, Virtual Box & VMWare, VxFS (HP-UX file system), Web Sockets, Webhooks, WinSCP, HTTPS Client, XML/XSLT, XMLSpy, Xalan/Xerces parsers, Consul Templates, Conductor (orchestration).