

Keith Lohnes

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EDUCATION

NORTHEASTERN UNIVERSITY January 2012

Boston, MA

- Bachelor of Science in Computer Science and Music *magna cum laude*

PROFESSIONAL EXPERIENCE

RoonCyber (formerly ThreatX)

Remote

Principal Software Engineer/Technical Lead

May 2023 - Present

- Architect and lead team of 4–6 engineers building agentless CNAPP product from 0-to-1
- Build runtime and network event correlation engine in Go mapping security events to MITRE ATT&CK tactics and techniques
- Architect HTTP transaction analyzer applying network security rules with concurrent caching; contribute upsert and eviction handlers upstream to mini-moka Rust crate
- Architect schema generation system producing OpenAPI specs from observed network traffic
- Lead Rust monolith to Rust microservices decomposition using domain-driven design bounded contexts
- Advise CEO on AI-first strategy; implement agent-driven architecture documentation keeping docs synchronized across repositories
- Technologies: Rust, Go, C, eBPF, gRPC, Protobuf, Kubernetes, MongoDB, Postgres, AWS S3, Kafka, OWASP Amass, Open Telemetry

Twisp

Remote

Principal Software Engineer

March 2022 - January 2023

- Implement write partitioning for ledger account isolation and read replication for account rollup balancing on DynamoDB's per-partition throughput limits; ensure continuous balance verification without degrading transaction ingestion
- Implement distributed Timestamp-as-a-Service (TaaS) in Rust to avoid GC pauses; quorum-based replicated monotonic counters with generational restarts persisted in DynamoDB
- Harden MVCC transaction layer through formal verification with Galois; fix implementation code paths that violated formally modeled isolation invariants
- Implement F1-style online schema migration for customer-defined schemas via dynamic protobufs on a zero-downtime distributed ledger
- Technologies: Go, bazel, AWS Lambda, DynamoDB, Rust, ECS, EC2, Docker, GraphQL, gRPC, Protobuf

Wallaroo Labs

New York City, NY (Remote)

Senior Software Engineer

June 2020 - March 2022

- Architect and implement Rust-based AI inference engine on Kubernetes; 10,000–70,000 req/sec across TensorFlow and ONNX models with zero-downtime model hot-swap via in-flight request draining; contribute fixes upstream to ONNX runtime and rust-s3 crates
- Build deployment coordination server managing model versioning, canary/blue-green rollouts, and auto-scaling on Kubernetes via Helm
- Design templated Keycloak OIDC integration enabling self-service enterprise SSO provisioning through Replicated install wizard
- Lead Pony-to-Rust language transition for engineering org through pair programming and code review
- Technologies: Rust, Erlang, Pony, Python, Azure, Kubernetes, TimescaleDB, Grafana, Docker, Helm, Hasura, Postgres, GraphQL, Keycloak

Vertex Software, LLC

Ames, IA (Remote)

Principal Software Engineer (Data)

November 2017 - May 2020

- Redesign data architecture from graph-only to polyglot persistence for CAD platform: precomputed assembly lineage paths, KV-backed triangle mesh store, and Kafka-driven rendering pipeline
- Lead live production migration via dual-write strategy from JanusGraph to polyglot architecture
- Serve as data architecture authority across engineering teams; guide storage technology selection, schema design, and query optimization
- Technologies: Java, Scala, JanusGraph on Cassandra, TinkerPop Gremlin, Elasticsearch, Protobuf, Flatbuffer, Kafka, MySQL, Postgres, DynamoDB, Apache Ignite, AWS, Docker

IBM

Boston, MA

Software Engineer

August 2015 - November 2017

- Develop and operate IBM Graph, a multi-tenant managed graph database service on IBM Cloud
- Implement and contribute upstream SASL-based authentication and WebSocket/HTTP protocol unification for Apache TinkerPop and JanusGraph
- Design and implement Compose.com's managed JanusGraph offering with multi-tenant isolation on shared Cassandra/Scylla clusters
- Prototype TinkerPop-compliant graph database on Postgres using Scala as vendor hedge after Aurelius/TitanDB acquisition by DataStax; ultimately ship JanusGraph on Scylla via Compose
- Technologies: Java, Scala, Spark, Postgres, JanusGraph on Cassandra, JanusGraph on Scylla, Tinkerpop Gremlin (Groovy/Java), Go, Ruby, Python, Docker, NodeJS, Kubernetes, IBM SoftLayer, IBM Bluemix, IBM Cloudant

Power Advocate, Inc

Boston, MA

Software Developer

January 2013 - July 2015

Co-op Developer/Jr. Software Developer

January 2009 - January 2013

- Build and ship spend categorization ML pipeline on Spark MLlib; implement Random Forest classifier contribution for MLlib
- Develop features across full JEE/JavaScript stack
- Technologies: Java, JEE, JPA, Spark, MLlib, HBase, HDFS, Apache Tomcat, Weblogic, Hibernate, Solr, ExtJs, JSP, jQuery, Spring, Oracle 11/12g