

Principal Software Engineer

Software Development | Cloud Architecture | C++, Python | GCP, AWS

Creative, hands-on, Principal Software Engineer with 30+ years in high-performance and real-time computing and team leadership delivering scalable and reliable solutions across software, cloud platforms, and databases using Agile methodologies, seeking a challenging position in architecture/design, development, and team leadership in high-performance/low-latency computing.

- Experience in scalability and low latency for cloud computing, distributed systems, databases, and application environments.
- Excels in object-oriented analysis and design (OOA/OOD), team leadership, and working cross-functionally in organizations.
- Team player with outstanding analytical, technical, prioritization, problem-solving, time-management, and conflict resolution skills.

SKILLS

Programming:	C++20, C11, Python; familiar with NodeJS, Objective-C, Swift
OS/Platforms:	Linux, OS X (Cocoa), Windows; Qt
Development Tools:	GNU/LLVM/CMake, Xcode, Visual Studio, Mathematica
Libraries/SDKs:	Familiar with TensorFlow, TFLite, TVM, OpenVINO
Databases:	SQLite, MySQL, MongoDB
Cloud Infrastructure:	GCP, AWS, Docker, Kubernetes
Documentation Tools:	Affinity Designer/Publisher, TeX (XeLaTeX)
Website:	https://www.hekster.org/Professional/
Languages:	English (Fluent), Dutch (Fluent); Conversational German, Hebrew, Portuguese

WORK EXPERIENCE

Principal Software Engineer

Relyance AI | San Francisco, CA | 02/2022 – 12/2025

Served cross-functionally in engineering as an individual contributor in software development, cloud infrastructure, and test automation for Relyance AI— a cloud-native AI monitoring and Data Security platform that maps data from code commit through cloud runtime and interactions leveraging LLM models, to provide visibility over data flows for privacy, threat detection, AI security, and automated compliance.

- As **Principal Software Developer**, contributed Python code and analysis to the data privacy product, including implementing SQL parsing and analysis, confidence score-based analysis.
 - Identified advanced analysis methods of PI detection and propagation in source code by prototyping heuristic-driven analysis methods using Wolfram Mathematica; developed working prototype in C++20 which showed dramatic improvements in analysis.
 - Reduced Docker microservices build size by 75% to support SOA through a complete refactoring of Docker builds.
 - Established cloud monitoring and alerting in GCP, greatly improving product reliability.
 - Improved internal quality control processes by developing tooling using Cocoa/Objective-C/C++; Google Cloud APIs.
 - Developed automated testing using Playwright and Node.js.
 - Significant contributor to the candidate selection and interviewing team for VP Engineering, Product Management, QA, and Engineering positions.
- As **Scrum Master** to the source code analysis team, established a clear, tailored, and predictable cadence of Scrum ‘ritual.’
 - Reduced significant WIP backlog 80% by managing ticket priority using structured backlog grooming.
 - Supported reasoned decisions about development resource allocation by taking a methodical and systematic approach to analyzing the problem domain.
 - Managed team priorities to focus on business-valuable work by maintaining Sprint board and planning.
 - Improved team communication by implementing processes for tracking and documenting progress.
 - Strengthened team coherence by mentoring and coaching new team members.

Principal Staff Engineer

FogHorn Systems | Sunnyvale, CA | 09/2017 – 01/2022

Delivered team leadership, architecture, design, and development for the maintenance and development of the company's industrial-grade edge computing Internet-of-Things (IIoT) product.

- Designed a Python-based API for real-time streaming analytics and transparent machine learning model using C++17 code generation based on XSLT, integrating TensorFlow, TFLite, TVM, and OpenVINO.
- Increased speed by 1000x and reduced memory utilization by 90% by optimizing stream processing
- Drove JSON to Avro migration, creating a 2000x improvement.
- Led local and remote teams using Scrum, with responsibility for hiring, evaluations, and performance reviews.

Principal Software Engineer

BlueKai (acquired by Oracle) | Cupertino, CA | 05/2013 – 09/2017

Team lead and designer/contributor of a low-latency cluster-distributed graph database in C++11 under Linux and OS X.

- Architected C++11 graph database with transparent cluster rebalancing, with 290k/s ops at sub-ms latency, with 100% uptime in production.
- Developed front end for monitoring and administration on nginx.
- Designed 'ID space' architecture that integrated efforts between engineering groups at the company.
- Pioneered Scrum and CI/CD, integrating QA into development workflows.

EARLIER CAREER

Senior Software Engineer | DigitalGlobe | Walnut Creek, CA | 03/2009 - 03/2013

Various Software Engineering Roles | Multiple Companies | Silicon Valley | 1994 - 2001

EDUCATION

Master of Science in Electrical Engineering (MSEE), University of Twente, Netherlands

- Additional Computer Science and additional Pure Mathematics components.
- Thesis in reflective object-based compiler architecture.
- Internships at Apple Computer, Macintosh System Software (Cupertino), and University of Oulu (Finland).

SPECIAL PROJECTS

- Design and hardware implementation of embedded projects, targeting Nordic nRF (Cortex M4), STM32, and PIC18 platforms.
 - USB general aviation radio panel for use with X-Plane
 - MIDI processor
- Wrote **solutions manuals** for mathematics textbooks *A First Course in Graph Theory* using Mathematica, and *Differential Geometry* using LaTeX, and *A First Course in Abstract Algebra*.