Ben Hekster
PO Box 391852, Mountain View, CA 94039-1852
+1-650-5753346
ben@hekster.org
http://www.hekster.org/Professional/

Summary

Principal Software Engineer with 20+ years in high-performance computing and team leadership delivering scalable and real-time analytics solutions. Excels in object-oriented design and analysis (OOA/OOD). Creative, hands-on, independent thinker. Team player, with great spoken and written communication and conflict resolution skills.

Seeking a challenging position in architecture/design, development, team leadership; in high-performance/low-latency computing.

Skills

Programming languages:	C++17, C99, Python, NodeJS
Cloud infrastructure:	GCP, AWS; Kubernetes, MongoDB

Professional Experience

February '22 – current	*Relyance AI, San Francisco, CA*

Principal Software Engineer of a cloud-native data privacy SaaS product in GCP and AWS, and led source code analysis team as Scrum Master:

- contributed to Python-based source code analysis for data privacy
- GCP monitoring/alerting for a cloud-native Kubernetes product
- refactored Docker microservice infrastructure to support SOA, reducing build sizes by 75%
- established a tailored Scrum cadence; reduced debilitating WIP backlog by 80%
- contributed to automated testing (Playwright; NodeJS)

September '17 – January '22	*FogHorn Systems, Sunnyvale, CA*

As **Principal Staff Engineer** on an edge computing IIoT product:

- designed Python Streaming API, implemented in C++ 17, for real-time analytics, integrating TensorFlow, TFLite, TVM, and OpenVINO
- optimized stream processing, achieving 1000x speed increase and 90% memory reduction
- led local and remote teams using Scrum, driving hiring and performance reviews

May '13 – September '17	*BlueKai (acquired by Oracle), Cupertino, CA*

As **Principal Software Engineer**:

- architected C++11 graph database with transparent cluster rebalancing, with 290k/s ops at sub-ms latency, never crashing in production
- developed front end on nginx

- designed 'ID space' architecture which integrated efforts of other groups at the company
- pioneered Scrum and CI/CD, integrating QA into development workflows

March '09 – March '13	*DigitalGlobe, Walnut Creek, CA (headquarters in Longmont, CO)*

As **Senior Software Engineer**:

- led a development team as Scrum Master, coordinating satellite office operations with HQ
- architected high-volume geospatial image (GIS) processing system written in C++ and Java, and GPU-based image processing
- developed a Win32/Linux cross-platform GUI in C++ for viewing image strips

1994-2001	Held engineering and leadership roles at SS8 Networks (Milpitas), CaseCentral (San Francisco), Minds and Technologies (Palo Alto), ReleaseNow (San Carlos), BackWeb and Odyssey Interactive Multimedia (Israel), focusing on C++ and cross-platform development.

Education

1986-1992	*University of Twente, Netherlands*

MSEE (cum laude) with 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).

Independent

Member of the Association for Computing Machinery (ACM). **Amateur Radio Technician Class** license.

Undergoing flight training for **Private Pilot** certificate (PP-ASEL); post-solo but pre-checkride.

President Darrow Farm Homeowners' Association.

2020-*current*	Designed embedded flight simulator radio panel USB device/X-Plane plug-in, and MIDI processor; targeting Nordic (ARM Cortex M4), STM32, and PIC18 platforms
2020, 2023	**Embedded** hardware and firmware design and implementation of **MIDI processor** on Nordic Semiconductor nRF52832. Reimplemented and final PCB using Microchip PIC18F2450.
2017-2019	Wrote solutions manuals for **mathematics textbooks** *A First Course in Graph Theory* using Mathematica, and *Differential Geometry* using LaTeX; and *Abstract Algebra*.