

James King

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Backend Software Developer and Polymath Provocateur

Summary

- Experience** I have over twenty years in software development, design, leadership and management roles. I maintain several open source libraries and projects.
- Technical Skills** I have recent experience in high-volume, critical online transaction processing, distributed systems, and back-end web application architecture in both the control and data plane.
- Principles** Writing is thinking. Understanding people and systems is an important focus of my work. Performance and correctness are related and worth designing for. If you write it, you can run it.

Languages

- C** Advanced *Familiar with C89, C99, and modern tools and practices.*
- Haskell** Expert *Have used the language on a 1M+ SLOC codebase for 4.5 years. Developed and maintain several open source libraries. Regularly stream myself working on various Haskell projects.*
- Javascript** Expert *Led the design and development of large scale applications both in NodeJS and in the browser.*
- Python** Expert *More then ten years of experience and contributions. Technical reviewer on Distributed Programming in Python by Pakt Publishing <http://bit.ly/1s0Z7sU>.*
- C++** Adept *Familiarity with STL, common design patterns and idioms. Contributed WebGL1 Vertex Array Object extension to Mozilla Firefox.*

Technologies

- | | | | |
|----------------------|---|--------------------|---|
| Databases | PostgreSQL, MySQL, Redis, TigerBeetle | Web Servers | Apache, Nginx |
| Architectures | CRUD, MVC, Event Sourcing, SOA | Web | Warp, Yesod, Express, Django |
| Devops | Terraform, Ansible, Open-Telemetry, Grafana, Prometheus | Cloud | EC2, S3, SQS, Kinesis, CW, Lambda, WAF, Route 53, RDS, Aurora |
| Platforms | Intel x86, x86_64 | OS | OSX 10.7+, Windows 7+, Linux 2.6+ |

Experience

- 2020-2025 **Senior Software Developer, Mercury Technologies**
- Designed and implemented critical, performance-sensitive Online Transaction Processing system for card transactions; one the most profitable sources of revenue for the company.
 - Worked with implementing and adopting observability tooling including Prometheus, Grafana, OpenTelemetry, Honeycomb and BugSnag, which allowed me to implement Service Level Objectives that reduced downtime and improved pro-active response to events.
 - Participated in regular rotations being on-call for system support and service response.
 - Implemented several Haskell libraries to support developers building on event sourcing and streaming architecture reducing development time and costs.
 - Established cross-functional working groups to share knowledge and develop best practices leading to adoption of innovations from my team to other teams.
 - Demonstrated product and systems thinking by designing tools and systems that included customers, support agents, and developers to reduce escalations of support requests to the engineering team while solving core, recurring customer complaints; increasing company reputation and customer satisfaction.
- 2016-2020 **Software Engineering Manager, Weever Apps**
- Set standards for coding guidelines, practices, and processes that led to increased reliability and faster time to market.
 - Created hiring processes and metrics.
 - Built a data-driven management process and culture which drove employee engagement and retention.
 - Led the design, specification, and development of core products using primarily NodeJS and Javascript that increased annual recurring revenue.
 - Conducted regular one-on-ones with team members.
 - Instituted a training program and conference budget which led to several product innovations.
 - Managed up as much as down, working with key stakeholders to ensure customer outcomes aligned with our development budget.
 - Developed process and culture to manage and reduce error rates which increased customer satisfaction and retention.
- 2014-2016 **Cloud Consultant, Dreamhost, Remote**
- Maintained, developed, and packaged core Openstack components
 - Developed key features such as utility billing and metering
- 2013-2014 **Contract Developer, SwiftStack, Remote**
- Maintained, developed, and packaged core Swift web controller for on-prem installations
 - Maintained, developed, and automated deployment of swiftstack.com
- 2012 **Contract Developer, Internap Network Services, Remote**
- Integrated Cinder into the production environment
- 2011-2012 **Senior Developer, Polar Mobile, Toronto**
- Developed a test-driven culture
 - Implemented key API endpoints and features
 - Provided mentorship to interns and junior team members

- 2010-2011 **Senior Developer, Panometrics Inc, Toronto**
Managed a legacy development project.
- Increased application up-time.
 - Replaced several legacy code paths while keeping the service running in production.
- 2008-2010 **Software Developer, Digisphere Inc, Toronto**
- Designed task processing system that processed large images across a distributed cluster
 - Scaled web application up to millions of unique impressions every month
 - Implemented search engine solution that crawled through millions of images and related metadata
- 2004-2007 **Software Developer, Misc, Toronto**
Further history available upon request.

Interests

- Streaming I run a weekly video stream where I work on programming projects for a live audience
- Board games I'm a huge gaming nerd and I have a collection of 30+ board games and table top RPGs.
- Formal Methods I'm a math nerd and spend some of my time learning theorem proving techniques.
- Sailing I recently took up sailing and race weekly in a club.