Jason Leonard

Profile

I'm a software engineer who enjoys distributed data systems, helping other developers, being glue and delivering business value.

Experience

Staff Engineer, Jason Leonard — 2017-2022

As a staff-plus engineering resource I focused on backend, developer productivity, infrastructure and leadership. My specialty was working with teams struggling to launch, educating while addressing process and architecture hurdles to ensure reliability, scalability and maintainability.

- A VC-backed mobile video shopping startup was failing to release its promised public beta. The backend had been written by former large company engineers unfamiliar with moving fast, production was plagued by hundreds of errors per hour & development would fail intermittently causing engineers to believe they'd broken something & waste cumulative hours troubleshooting. Half hour+ deploy/rollback times had created a culture of fear. Duplicate effort & work on stale projects were both major issues.
  - Rewrote backend, reducing size of codebase 70% and resolving 100% of ongoing errors
  - Designed activity feed algorithms and built activity feed backend
  - Reduced deploy/rollback times 80%+
  - Implemented planning and review meetings, eliminating duplicate effort and stale tickets
  - Drove successful effort to increase test coverage more than 500%
  - Coached first-time CEO on startup operations and leadership
  - Led team to successful product launch
- Worked with a restaurant chain to deliver an online ordering and logistics backend
- Assisted a mobile database startup building a SaaS
- Helped launch a rental equipment management app for ski resorts and mountain sports retailers

Lead Engineer, Slide Rule Software/Glass Planner — 2015-2017

I had end-to-end ownership of everything from engineering to communications to design to managing our relationships with Apple and investors. Glass Planner was named a Best New App by Apple and was featured with a large banner for several weeks in the App Store's Productivity section.

- Directed all aspects of the company through explosive growth
- Developed Akka syncing system to attach arbitrary data to third-party calendar objects
- Led development of backend, infrastructure and mobile apps
- Drove implementation of continuous delivery, increasing release frequency 90%
- Partnered with App Store editors to choose & implement Apple showcase features prior to iOS releases
- Migrated authentication to Firebase, reducing customer service requests 20% and cost 80%
- Grew team from four to twelve, implemented async work paradigm and radical transparency
- Automated release processes with Fastlane and custom tooling, dropping release times 80%

Senior Software Engineer, Geezeo — 2013-2014

I led initiatives to address scaling issues with legacy systems processing financial transactions for hundreds of banks and credit unions, as well as conceiving and leading development of a next-generation data processing pipeline. I developed external partnerships and represented engineering in high-stakes sales presentations.

- Developed novel key strategies to resolve scaling issues, reducing DynamoDB errors 99% & costs 40%
- Partnered with Lightbend on migration from Rails to Scala and new Akka data processing pipeline
- Wrote *moe* library for working with DynamoDB at scale—compound keys, time-series tables, etc
- Uncovered and resolved time zone defects in 20% of tests, sped up test suite runs by 400%+
- Won $1m/year contract on the strength of a data pipeline product I designed morning of the pitch
- Authored the official Geezeo API Ruby gem, *gzo*

Contract Software Engineer, Fidelity Life — 2011-2013
We transformed paper-based, human-processed insurance forms into an automated online system.

- Built multirepo coordination tools to resolve release issues, increasing deploys ~300%
- Solved ordering problems related to tightly-coupled microservice deploys, reducing downtime ~50%

Staff Software Engineer, Color Technology — 2010-2011
I built product licensing and wholesale catalog management applications for major brands.

- Product lead for Boise Cascade, Brand Sense Partners, CBS, Fox, Jessica Simpson & MGM
- Implemented Rails engines and extracted shared code into Ruby gems to mitigate duplicated effort
- Rewrote CSV processing to improve performance 65% and resolve issues uploading very large files
- Designed pre-Docker/Kubernetes/Terraform container orchestration system, reducing infra costs 85%
- Built out managed network services, firewalls, VPN and IDS with custom embedded FreeBSD boxes

Chief Technology Officer, FieldReport — 2008-2009
FieldReport was giving away the world's largest-ever cash prize for a single piece of writing. We were hailed as "The American Idol of Blogging" by the New York Times, National Public Radio and Time Magazine. Using Ruby on Rails we leveraged EngineYard, GitHub, Lighthouse and Campfire to facilitate collaboration and eliminate the need to hire operations staff.

- Led development of the FieldReport web application
- As Editor-in-Chief worked closely with major publishers & agencies like Condé Nast & William Morris
- Grew engineering team from three to ten, implemented agile processes and async work paradigm
- Reduced infrastructure costs 90%+ migrating to the cloud and leveraging SaaS-based IT products

Storage Engineer, Kodak Gallery — 2007-2008
My team designed and managed the multi-petabyte, globally-distributed storage infrastructure of a major Internet media site. I initiated and led development of a next-generation monitoring and automated management infrastructure; the storage team was subsequently acquired by Savvis.

- Built a web-fronted management, monitoring & self-healing system that eliminated 80% of manual effort
- Identified and exploited undocumented APIs to enable Linux management of Isilon clusters

Engineering Manager, Linguistic Data Consortium, University of Pennsylvania — 2003-2006
I was the manager and senior technical member of LDC's systems group. I drove the transition of all computing and network services, formerly outsourced to the School of Engineering, to an internally-sourced model in order to support petabyte-scale data collection and analysis.

- Built a pre-AWS self-service storage & compute cloud, reducing costs 70% and provisioning time 99%
- Surplus cloud capacity was provided to other ML and NLP research organizations around the world
- Worked with ML team to build a Hadoop-like system analogous to Google's contemporaneous work
- Wrote backup software 300%+ faster than any commercial product, wrote tape library drivers
- Implemented data center automation and 100% OOB management, enabling team to work remote
- Ran >12T volumes in 2T limit days, resolving OS, filesystem & driver issues at the bleeding edge of scale
- Built a distributed filesystem with customizable views to support legacy ML tools with hardcoded paths
- Developed Hammer configuration management system, decreasing deployment times 99%+
- Built novel hard disk duplication system, upping capacity+throughput 800% over commercial solutions

Principal Engineer, Computer Support Associates — 2000-2001
I conceived and built a managed network security services product that was one of the first examples of Security as a Service. CSA had offices throughout the South and Midwest.

- Led development of managed firewall/IDS devices and built the security organization
- Partnered with BellSouth to provide value-add services to broadband customers

Internet Network Engineer III, MCI WorldCom Advanced Networks/UUNET — 1999-2000
I served as a WAN backbone and IP engineer on the world's largest network.

- Lead engineer onsite December 31, 1999 responsible for managing catastrophic Y2K scenarios
- Formed Router Operations Center team to consolidate network management from acquired companies
- Delivered nine-figure networking contract on time after implementation team had given up on deadline