Casey Peel
Seattle, WA

[Blog](#)
[GitHub](#)
[LinkedIn](#)

Quick Hits
- Broad software development experience: IC, technical team lead, project manager, people manager
- Highly adaptable leader, can switch gears quickly based on business needs and direction
- Deeply technical yet socially adept enough to stick in front of customers, C-suite, and other stakeholders
- Fierce advocate of diversity in the workplace particularly of women, LGBTQ+ people, and people of color

Professional Experience

Invitae   *2021-Present*
Staff Software Engineer & Technical Team Lead – Sample to Answer
- Drive software architecture best practices and improve software scalability & performance across the Sample to Answer organization (from sequencers to bioinformatics pipelines to reports).
- Led migrating our Lab Information Management System (LIMS) to our internal k8s-based cloud platform. When I joined the team, this effort was stalled after 9 months of work. I identified that the original approach was not aligned with the engineering org's best practices. After adjusting the team direction and navigating numerous prioritization exercises the migration was completed in 3 months.
- Improved the performance, scalability, and stability of our key datastore. Worked with downstream consumers to more efficiently use the LIMS system reducing load by 30%.
- Significantly reduced our cloud spend by optimizing workloads, right-sizing deployment resources, and decommissioning deprecated systems.
- Worked with our internal security teams, cloud infrastructure team, and other key stakeholders to define the technical security controls needed to enable international developers access to our production LIMS infrastructure and services. Implementing these controls let us add international developers to the on-call rotation enabling a follow-the-sun support model for our San Francisco lab.

ExtraHop Networks   *2018-2021*
Sr. Principal Software Engineer & Technical Team Lead – Performance & Tools Team
- Lead and technically manage cross-functional perf & tools team responsible for all product performance across the ExtraHop portfolio. This spans slinging code, code reviews, tool architecture design, managing team sprints, running scrums, and setting team direction and deliverables.
- Transformed perf & tools team from a post-release validation effort largely outside of the primary release process to an integrated part of feature development. The team is now aligned with engineering's quarterly release cadence and involved from feature design and prototyping through validation.
- Provide technical leadership and direction for the 25-person Glue organization which encompasses perf & tools, validation, automation, and engineering DevOps. Initiate and manage major transformation initiatives to the org such as updating tooling to python3, establishing coding standards and best practices, introducing proper python packaging, and using CI/CD to maintain high code quality code.
- Solve critical process and tooling needs to rescue blocked teams throughout engineering. Some examples include updating ML builds to reduce CI/CD times from 4 hours down to 30 minutes, building new tooling to remove manual processes and increase detector development velocity, and migrating TechPubs' build system from svn/Bamboo to git/Gitlab.
- Co-architected Reveal(x) Cloud, ExtraHop's first SaaS product, that provides customers security insight into their AWS environments. Led the small tiger team of software engineers that designed, created, and delivered this solution from proof of concept to market in 4 months. This has become a foundational building block for ExtraHop's now-flagship Reveal(x) 360 offering.

Casey Peel
Seattle, WA

Spaceflight Industries   *2016-2018*
Software Development Manager – Ground & Control
- Delivered Gemini, the ground and control system for our next generation of Earth-imaging satellites. We learned a lot from Mercury, our first generation system used to control Pathfinder-1, and we took those lessons to design Gemini from the ground up to be fast, resilient, and reliable.
- Drove Gemini architectural design discussions to ensure: functional requirements were met, system scalability as we launched more satellites, low-latency telemetry pipeline for real-time feedback during contact passes, and monitoring & alerting to identify problems and escalate them to operators.
- Prioritized development tasks and triaged work to available resources to ensure company milestones were achieved and status was communicated to stakeholders.
- Coordinated closely with operations team, our internal customer, to ensure the system satisfied their use cases, including UI for manual commanding during launch / early operations and full system automation after initial spacecraft check-out. Delivered high-quality code drops for operator evaluation prior to launch.
- Managed regular, stable release deployments to the staging and production environments and connected groundstations for full system rehearsals and system check-out.
- Worked with the flight software team to ensure successful commanding of the spacecraft and downlinking of images, system logs, and telemetry reliably and securely.
- Lead software validation team to validate the software running our satellites, the software and hardware systems that tasks them from the ground, and everything in-between. Coordinated with the spacecraft hardware validation (AI&T) team to provide software necessary for hardware validation and check-out.

EMC Isilon Storage Division   *2010-2016*
Consulting Performance Engineer
- Found cluster scalability pain-points and drove resolution of them across multiple teams in preparation for new hardware platforms that increased the supported cluster size by 2x.
- Led four teams (Infrastructure-, Test-, and Build-as-a-Service teams plus the Orchestration layer team) who are working to reinvent how Isilon builds products as the organization moves to a DevOps model.
- Architected overall DevOps system and ensured that the four teams integrated together. Technical consultant for the Infrastructure as a Service team due to my deep knowledge about the OneFS product as well as our internal infrastructure.
- Led the validation team upgrading the OneFS base OS from FreeBSD 7 to FreeBSD 10. Created tooling to test the development code in the standard OneFS automated regression system on virtual and real hardware well before the existing system could handle it.
- Led the team responsible for the creation of a performance build verification suite (PerfBVT) to detect performance regressions on branches during their development and prior to their merge to HEAD.
- Led performance testing and characterization of the OneFS 7.0 cornerstone features: multiwriter, endurant cache, and clones.

IBM Corporation   *2000-2010*
Performance Lead for Tivoli Identity Manager
- Increased Tivoli Identity Manager performance in key product areas by 18 times and scalability of resident user population from 10k users to 5m users.
- Resolved customer critical situations both remotely and on site. Assisted support teams when customers encountered performance- or scalability-related problems.
- Advised development teams on best practices for performance and scale, including: algorithms, caching, database design, and middleware tuning.
- Collaborated with product architects to ensure new features met customer performance and scale goals.
- Wrote and maintained documentation, including official product tuning guides, to assist sales teams, implementers, support, and customers with tuning. Created tools to troubleshoot performance problems.

Casey Peel
Seattle, WA

Volunteer Experience

Distributed Proofreaders   *2006-present*
   Distributed Proofreaders (pgdp.net) is the largest contributors of public domain eBooks to Project Gutenberg.
   Lead Developer & System Administrator
- Transitioned entire codebase, processes, and in-flight books from Latin-1 to Unicode with zero dataloss or downtime. I was responsible for the planning, coding, leading the validation effort, and deployment.
- Updated 20-year-old organic codebase to support modern versions of PHP and MySQL.
- Created an abstraction layer for the code's forum integration allowing migration from phpBB 2.x to 3.x.
- Migrated project from CVS to git. Created git workflow documentation and taught git training classes to assist developers in the transition.
- Created and published development virtual machine with all middleware installed and configured to make it easier for new developers to get started as well as enable testing of later middleware versions.
- Developed WordCheck, a new proofreading-specific tool to help detect scannos and other OCR errors that replaced the ill-suited conventional spellcheck.
- Created the Site Progress Snapshot display and the round status graphs to alert users to later rounds of the site that need more volunteers. This balanced volunteer work and increased overall site throughput.

Publications

Team- and career-centric articles
- Enabling teams to warp factor 10
- Resume tips when applying for an SDET job

Popular technical articles
- Secret sauce to including data_files in python bdist_rpm
- Installing yaz for PHP on Ubuntu

Work publications
- IBM Tivoli Identity Manager Performance Tuning Guides: application guide, API guide, scripts

Education

   Texas A&M University, BS Computer Science, May 2000

Skills

- Project coordination: I've successfully led small- and mid-sized teams, including cross-organizational ones, to achieve a common goal all while keeping management apprised of our progress
- Languages: proficient in python, PHP, and bash for designing one-time scripts and maintainable tools and product test suites; C/C++ coding in the late 90s – can read and tweak it but not proficient enough to develop in it
- Extensive platform experience: Linux & Mac OS X; FreeBSD, AIX and Solaris in a former life
- Database design and management: MySQL, PostgreSQL, and DB2
- DevOps tooling experience: docker, kubernetes, Terraform, AWS/GovCloud, VMware ESX/vSphere, Elasticsearch/Kibana, logstash
- Daily tools: Mac & Linux desktops, python, git, bash/ksh, standard unix toolchain