

# SPENSER HALE

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## LEAD SOFTWARE ENGINEER

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I am a lead software engineer with over a decade of experience. My career is dedicated to using technology for meaningful impact. My approach is rooted in pragmatism: I choose the optimal tools and methodologies while considering resources and limitations to determine the best fit for each project. As company priorities shifted, I switched between multiple disciplines and roles as needed. I have led product development and infrastructure rearchitecting from single closet servers with a few dozen clients to a multi-cloud deployment serving millions of patients. I am looking to solve new business problems with software.

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## EXPERIENCE

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### RevenueWell — Lead Software Engineer

Feb 2021 - Present

- **Earned Project of the Year** by identifying critical business continuity risks and leading a monumental mitigation project. Addressed multiple single points of failure and single-threaded processes by leading cross-training efforts and documentation creation to ensure coverage. Contracted vendors to bridge technological expertise and operational capacity gaps. Migrated our platform (TBs of data, 100m URLs, and 500k tables) to a new cloud provider to improve stability and scalability. Reduced the total cost of ownership by \$305k/yr and increased our uptime to 99.999%.
- **Decreased churn to less than 2%** by leading customer-focused product development. Identified client and business needs and led the development of new client outcome reporting dashboards, automated client onboarding steps, and overhauled legacy processes and user interfaces to improve user experience.
- **Saved \$1.2m annually** by leading numerous cost-saving projects. Improved tiered caching systems to reduce uncached hits by 66%. Profiled and identified unused data to slash average database query sizes by 80%. Consolidated a dozen services and vendors across teams to reduce operational costs and improve efficiency.
- **Created platform KPIs** such as real user experience metrics, product usage and outcomes, and customer demographics across our platform and extracted to business intelligence data warehouses for broad team and cross-system access. The integration allows data analysis to identify and address clients at risk of churning.
- **Awarded Outstanding Contribution** for cultivating a collaborative culture amid a company merger by organizing virtual meet and greets and team-building initiatives aimed at social good, including food distribution and environmental cleanups.

ReactJS, VueJS, Functional Programming, Event-driven Design, Queue Systems, API Design, APM, DataDog, New Relic

### PBHS Inc. — Senior Software Engineer

Jan 2017 - Feb 2021

- **Increased uptime to 99.95%** by rearchitecting and migrating our platform to AWS. We outgrew our bare metal infrastructure in our colocation data center as we were fully saturating their network and having outages. I designed to use AWS's scalable services, such as EC2, EFS, and RDS, to meet new traffic demands. To reduce the costs and compatibility issues, I also switched tech stacks from Windows, IIS, and MSSQL to Linux, NGINX, and MySQL. There were thousands of hard-coded DNS records that clients controlled, but I created a migration plan that would convert traffic in steps. We had a stellar success with clients only experiencing < 30 seconds of downtime during off-hours.
- **Improved page speed by 400% (P50 4s to 1s)** by implementing a reverse proxy cache on Cloudflare's network to deliver our 50 million web pages from 200+ data centers under 100ms. It has the added benefit of withstanding DDoS (Denial of Service) attacks, with our largest recorded of over 20m requests per minute.
- **Prevented over \$2 million in fines** by auditing for and resolving security gaps. Found and mitigated security misconfigurations, sensitive data exposures, SQL injection, and Cross-site scripting.
- **Modernized backend platform** by implementing package management, an object container, and dependency injection. Implemented service provider pattern and designed just-in-time runtime processing through event-driven design. I created encapsulation so our developers can write declarative instead of imperative code. I created facades to allow easy of use while having a more decoupled implementation.
- **Reduced deploy time to under 5 minutes** by developing continuous integration and deployment (CI/CD) for our monolith codebase with 100k+ files. Previously, it was a two-hour manual process. I implemented atomic deploys to have zero downtime deployments. I also added health checks to our deployment pipeline and enabled automatic rollbacks on failures.
- **Improved mean time to recovery** by creating system health alerts and centralized error reporting. Started capturing error stack traces with request data to improve diagnosis and resolution times.

Backend, DevOps, CI/CD, GIT, SVN, OOP, TDD, PHP, Composer, AWS (EC2, EFS, RDS), Azure, BuddyCI, Cloudflare, Rollbar

### PBHS Inc. — Software Engineer

Jan 2015 - Jan 2017

- Improved page speed by 300% (P50 12s to 4s) by deploying the platform's first CDN (content delivery network).
- Saved \$600k over five years by reducing data center usage by 1.5TB/mo and negotiated a \$96k/yr discount from CDN.
- Developed MyOMS.org with industry partner AAOMS under a tight deadline for the trade show debut.
- Updated designs to be WCAG (Web Content Accessibility Guidelines) compliant, ensuring meets ADA requirements.
- Halved churn by mocking new intuitive flow for the EMR app by analyzing user feedback and user research.

TypeScript, JavaScript, VueJS, C#, Java, ADA, UX, WCAG, HotJar, Invision, StackPath, Stripe, Zendesk

### PBHS Inc. — Web Developer

Jan 2013 - Jan 2015

- Produced \$250k annually in client billable revenue.
- Added structured markup to platform content data for Google featured snippets and optimization.
- Raised video content engagement by 361% through product revamp.

HTML, JS, CSS, Bootstrap, jQuery, Schema, Microdata, JSON-LD, SEO, SEM, WordPress, Wistia

### Riviera Computers Inc. — Server Administrator

Jan 2010 - Jan 2013

MSSQL & MySQL Administration, IIS, LEMP, Linux, NGINX, Apache, Python, VLAN, VMware vSphere

### Riviera Computers Inc. — Information Technology Technician

May 2008 - Jan 2010

CompTIA A+, Microsoft Certified Associate, Bash Scripting, Active Directory