

# Andrew Rodland

Software Developer, Technical Lead, and Unix Automator

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## Summary

I'm a polyglot developer with nearly 15 years of full-stack experience. I'm equally capable at web development, backend services, systems and tools programming, and systems administration. I contribute to open-source software, and I make myself a resource to the people around me. I'm always willing to learn new technology, and equally willing to use something battle-tested and proven.

## Professional Experience

**January 2020 – Present:** Principal Engineer, Machine Learning & Video QoE

**February 2018 – January 2020:** Principal Engineer, Video Systems

**October 2018 – September 2019:** Lead Engineer, Live Video Platform

**March 2015 – Present:** Senior Backend Engineer, Video Systems

**Vimeo, LLC**

I develop software and maintain infrastructure for video uploading, transcoding, and streaming, working primarily in Go. Moved several services to the cloud, and implemented a novel load-balancing algorithm in HAProxy to improve the scalability of video delivery. I was a primary contributor to the architecture of Vimeo Live and wrote several of the backend services. Using instrumentation to improve the robustness and performance of services has been a recurring theme.

**October 2014 – February 2015:** Principal Engineer, Customer Experience and Content Pipeline;

**October 2011 – October 2014:** Technical Lead, Customer Experience;

**July – October 2011:** Developer, Customer Experience;

**April – July 2011:** Developer, Large Accounts;

**Shutterstock Inc.**

While at Shutterstock I worked throughout the stack in an agile environment building user-facing web applications, services, and tools. I have written applications in Perl (Mason and Dancer), NodeJS, Python, and C, making use of a great variety of technologies including HTML/CSS/JS, jQuery, Prototype, Bootstrap, socket.io, MySQL/MariaDB, Redis/Sentinel, Hadoop/Hive/MapReduce, Zookeeper, Solr, StatsD and Graphite. I contributed to the development of in-house tools for user behavior tracking, A/B testing, and code deployment. My time on the Large Accounts team saw the initial launch of Shutterstock's enterprise product, and during my 3 years as technical lead the Customer Experience team made many great improvements to content discovery and downloading on the site as well as transitioning to a services-oriented architecture.

**April 2006 – March 2011:** Developer and Systems Administrator,  
**PlatinumTel Communications, LLC / HBS Labs, LLC.**

I was hired in a software development position, and over time my responsibilities grew to include application design and systems administration tasks. As part of a small team I maintained as well as created a number of web applications using Perl and Catalyst with Oracle DB, and built an e-commerce site for phone sales. I maintained telephony apps using Perl and Asterisk, wrote scripts for ETL and data mining tasks, did day-to-day administration and established monitoring for an in-house server room.

## Talks and Papers

**HAProxy Load Balancing at Vimeo:** HAProxyConf, Amsterdam, November 2019.

**Load Balancing, Consistent Hashing, and Locality:** Velocity NY, New York, NY, October 2017.

**Improving Load Balancing with a New Consistent Hashing Algorithm:** Vimeo Engineering Blog, December 2016. Cited and given special acknowledgement in **Consistent Hashing with Bounded Loads** (Mirrokni, Thorup, Zadimoghaddam 2017).

**FLOSS Weekly Episode 321** on the Marpa parsing framework, with Randal Schwartz and Gareth Greenaway, January 2015.

**Parsing Made Easyish with Marpa,** Perl Oasis 2013, Orlando, FL, January 2013. Revised and expanded for YAPC::NA 2014, Orlando, FL, June 2014.

**StatsD and You – Easy Application Metrics:** YAPC::NA 2013, Austin, TX, June 2013. Revised for Pittsburgh Perl Workshop, Pittsburgh, PA, October 2014.

**Web::Simple – A Perl Web Nano-Framework:** YAPC::NA 2012, Madison, WI, June 2012. Revised and expanded for Shutterstock tech-talk, September 2012.

**Arduino-Based GPS-Disciplined NTP Server:** YAPC::NA 2012 Hardware Hackathon, Madison, WI, June 2012.

**Dynamic Website Translation with Catalyst and Petal:** YAPC::NA 2007, Houston, TX, June 2007.

## Other Notables

- I created and maintain several CPAN modules including Crypt::PBKDF2 (password hashing), Test::Exit (unit testing), Net::Statsd::Client (a client for Etsy's StatsD metrics aggregator), and Unicode::CaseFold (unicode case normalization). I co-maintain a few more modules.
- I am a credited contributor to many open-source projects. I have a tiny patch in Linux.
- I have been credited for technical contributions to *The Definitive Guide to Catalyst* (Diment, Trout 2009) and *Effective Perl Programming 2/e* (Hall, McAdams, foy 2010).
- I am listed as co-inventor on two Shutterstock-owned patent applications relating to innovative image search tools.
- I am an amateur radio operator, and maintain a website that combines realtime and model data to predict ionospheric radio propagation.