

Brad Clawsie
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Overview

I have twenty-three years of experience building online services from concept through to delivery for the highest tier of scaling needs in the industry, with experience in every segment of the product stack from uptime-critical backend systems and devops to team leadership and strategic planning. I work at the intersection of design, architecture, implementation, planning and operations. I actively participate in open source communities.

Skills and Strengths

- **Programming languages:** Go, C++, C, Haskell, Java, Javascript, Perl, Python.
- **Infrastructure:** AWS, Docker, Compose, Kubernetes, Google Cloud.
- **Management:** Requirements planning, scope reduction, release management, interfacing with stakeholders.
- **Systems:** Postgres, MySQL, SQLite, Redis, Memcached, DynamoDB, Linux administration.
- **Practices:** Security auditing, prototyping, performance tuning, analytics.

Professional Experience

Senior Software Developer
Cruise Automation
San Francisco CA (remote from Austin, TX)
March 2018-March 2019

- Development, deployment and maintenance of large-scale build tooling for autonomous vehicle simulation.
- Architecture and deployment of large-scale work distribution systems.
- Optimization of cloud infrastructure.
- Large scale orchestration of AWS and Google Cloud tools.
- *Key Skills:* Go, Python, Docker, Postgres, Redis, Kubernetes, AWS, Google Cloud, operations.

Senior Software Developer

ThinAir Inc

Mountain View, CA

2017

- Security startup deploying a runtime agent to client computers for centralized event aggregation and forensic analysis of large data sets.
- Architecture and delivery of a mission-critical Go codebase and data layer for complete user-management; login, billing, and resource provisioning. Completion of this project allowed the company to move from a professional services model to public deployment.
- Analysis and optimization strategies for a complex Postgres schema.
- Mentoring and prioritization for junior developers.
- *Key Skills:* Whole-system design, Go, Postgres, AWS, Python, ReST APIs.

Senior Software Developer

Advanced Innovations Group, IBM Inc.

San Jose, CA

Oct 2015-2017

- Research position focused on rapid development of testbed technologies and exploration of new endeavors in order to expand the business presence of IBM.
- Development of Go Ethereum-based contract technology for work distribution to embedded devices (patent grant). This work enabled distribution for the Watson AI platform as well as changes integrated into the Ethereum codebase.
- Development of software-defined networking for high-volume dynamic routing of video content. Operated as team technical architecture lead as well as review and management of fellow implementers. This work created a new business unit for IBM, allowing it to participate in the CDN marketplace.
- *Key Skills:* Whole-system, design, Go, Postgres, ReST APIs, Javascript.

Software Developer

SmugMug Inc.

Mountain View, CA

Feb 2009-Oct 2015

- Full-stack web development focused on the delivery of commercial-grade photo storage and sales.
- Full project life-cycle ownership with independent oversight of design, operations, and stakeholder satisfaction.
- Implementation of a full analytics system for user statistics. This distributed system manages hundred of millions of records per day, sourcing raw data from Cloudflare and processing it for direct consumption by end-users in near real-time. This system continues to function and fulfills the analytics needs of thousands of subscribers.
- Implementation of payment mechanisms with currency support to enable all site ecommerce.

- Implementation of a SDK and proxy for Amazon's DynamoDB in Go. Presented at AWS Re:Invent.
- Migration of data from MySQL to DynamoDB.
- *Key Skills:* Whole-system design, Go, MySQL, AWS, DynamoDB, C++, ReST APIs, Perl.

Technical Yahoo

Yahoo! Inc.

Sunnyvale, CA

May 1996-Feb 2009

- Employee #83, group of first dozen engineers to bootstrap Yahoo.
- 1996: Maintainer of the database of all links in the Yahoo Directory.
- 1996-2000: Sole developer and maintainer of Yahoo News.
- 2000-2005: Developer of Yahoo Shopping and development team manager.
- 2005-2007: Developer of Yahoo Maps and Local Search.
- 2007-2009: Yahoo Pipes maintenance and Yahoo Query Language Developer.
- *Key Skills:* Perl, C, C++.

Developer

Passage Systems

Cupertino, CA

October 1995-May 1996

- Worked on systems for large-scale SGML conversion and processing.

Developer

MicroStar Systems

Nepean, Ontario, Canada

December 1994-October 1995

- Worked on systems for designing SGML DTDs graphically.

Portfolio

- **Community Education:**
 - AWS Re:Invent 2013 presentation: "Migrating from MySQL to DynamoDB" ([pics](#), [video/slides](#)).
- **Intellectual Property:**
 - [Patents regarding decentralized IoT applications involving blockchain and software radio](#).
- **Open Source Contributions:**
 - [RSCS](#), The Ridiculously Simple Configuration System
 - [httpdshutdown](#), Graceful shutdown of http daemons in Go
 - [awsv4-cpp](#): AWS v4 signing in C++11
 - [uparse](#): a C11 library for parsing common urls
 - [bbpd](#): an http proxy for Amazon DynamoDB written in Go, featured as a showcase topic at AWS Re:Invent 2013
 - [godynamo](#): a Go SDK for Amazon DynamoDB, featured as a showcase topic at AWS Re:Invent 2013
 - [consistent_hash](#): a Go library implementing a consistent hash
 - [modulo_hash](#): a Go library implementing a simple load-balancing hash
 - [bloomfilter](#): a Go library implementing a bloom filter
 - [bitset](#): a Go library implementing a bitset
 - [Context](#), A building block for concurrent programming in Perl6 based on Go's context package
 - [DB::Rscs](#), a Perl6 Client for [RSCS](#)
 - [Net::IP::Parse](#), Perl6 IP and CIDR types
 - [WebService::AWS::Auth::V4](#), Perl6 AWS Auth V4 methods
 - [Subsets::Common](#): some useful Perl6 subsets
 - [Hash::Consistent](#): a consistent hash in Perl6
 - [goawsroles](#): a Go library for concurrent management of AWS IAM tokens
 - [Finance.Quote.Yahoo](#): a Haskell stock quote library
 - [Data.Hash.Consistent](#): a Haskell SHA1-based consistent hash library
 - [Perl-Text-Authinfo](#): a Perl authinfo database manager

Education

B.Sc Computer Science, Queen's University, Kingston Ontario, Canada 1994.

I am a naturalized US citizen.