

# Andrew Bennett

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## Personal Summary

I am a polyglot software engineer from Georgia living in the Dallas, Texas area with my wife and our two daughters. I enjoy architecting customer-value focused systems that are securely distributed, fault-tolerant, and highly-available. I specialize in analyzing performance on everything from the operating system kernel level to the client-side or embedded applications themselves.

## Technical

### Expert

- *Programming*
  - C, CSS, Elixir, Erlang, HTML, Java, JavaScript, Ruby, Rust, Python, Shell Scripting, TypeScript
- *Frameworks*
  - Absinthe, Angular, Elixir Phoenix, Ember, Erlang/OTP, Flask, GraphQL, gRPC, Ionic, Kubernetes, pkgsrc, Ruby on Rails, TI RTOS, Vue.js
- *Operating Systems*
  - Docker, SmartOS, FreeBSD, macOS, Linux (Alpine, Arch, CentOS, and Debian/Ubuntu)
- *Spoken Languages*
  - English, Spanish

### Intermediate

- *Programming*
  - C++, Go, Haskell, Kotlin, Swift
- *Frameworks*
  - Android Studio, autoconf, automake, BSD Make, GNU Make, Xcode

### Basic

- *Programming*
  - Objective-C, Perl, PHP
- *Frameworks*
  - CMake, Ninja
- *Spoken Languages*
  - Italian, Japanese, Portuguese

## Employment

### **Toyota Connected** (Plano, TX)

*Senior Software Engineer, Tech Lead, 2017-present*

Worked on several large teams planning, architecting, designing, developing, testing, securing, and delivering multiple end-to-end customer-focused products from inception to post-launch continuous development in Hawaii, Japan, Europe, and North America. Worked with teams in Japan, Europe, India, Thailand, and Australia to establish global team collaboration patterns for other regional products. Practiced Scrum and agile methodologies at local as well as global scale. Mentored and managed other engineers, worked closely with customers, and held the role of product owner when needed. Gained experience with large-scale telematics stream processing, big data processing, high-availability distributed systems design, customer-focused agile methodologies, Internet of Things (IoT) design, edge computing, automotive UI/UX design, machine learning, Azure, AWS, cryptography, and security practices.

### **Rogue Financial, LLC/Vista Insurance Producers, LLC** (remotely from Menan, ID)

*Director of Information Technology, 2016-2017*

Planned and developed the majority of the backend services and infrastructure for this insurance technology company. Server setup involves multiple intercommunicating SmartOS hosts which have been configured for high-availability. Multiple front-ends built with Angular and Vue.js which communicate with common backend API services.

#### Accomplishments

- Technologies employed: Angular, C, Erlang, Elixir, Node.js, PostgreSQL, Redis, Ruby on Rails, SmartOS, Vue.js
- Developed a distributed OAuth 2.0, OpenID Connect Core 1.0, and UMA 2.0 service used by insurance agencies to manage identity and user managed access between agents, carriers, and brokers.

### **Freelance: WealthSmart America, LLC** (remotely from Menan, ID)

*Web Developer/Server Administrator, 2014-2016*

Planned and developed the majority of the backend services and infrastructure for this insurance company. Developed financial reporting, commissions, and payments system. Developed carrier feed integrations for tracking insurance applications. Developed lead system and simple analytics for tracking lead phone calls and other agent interactions. Server setup involves multiple intercommunicating SmartOS hosts which have been configured for high-availability. Multiple front-ends built with Angular which communicate with a common API.

#### Accomplishments

- Technologies employed: Angular, C, Erlang, Elixir, MongoDB, Node.js, Redis, Ruby on Rails, SmartOS
- Open Source
  - Erlang and Elixir JOSE RFC library (JWA, JWE, JWK, JWS, JWT)  
<https://github.com/potatosalad/erlang-jose>
  - Erlang Lightweight FTP Client  
<https://github.com/potatosalad/lftpclient>
  - Erlang Joyent Manta Client  
<https://github.com/potatosalad/erlang-manta>
  - Erlang RSASSA-PSS Public Key signing algorithm implementation  
[https://github.com/potatosalad/erlang-crypto\\_rsassa\\_pss](https://github.com/potatosalad/erlang-crypto_rsassa_pss)
  - Erlang and Elixir HTTP Signature Scheme library  
[https://github.com/potatosalad/erlang-http\\_signature](https://github.com/potatosalad/erlang-http_signature)

**Freelance: Americo Manufacturing Company, Inc** (remotely from Menan, ID)

*Mobile App, Web Developer/Server Administrator, 2014-2015*

Planned and developed the backend services and infrastructure for this floor mat and floor pad manufacturing company. Developed mobile app using the Ionic framework. Developed admin panel and API service for administering the content available in the app.

Accomplishments

- Technologies employed: Angular, Cordova, Ionic, Node.js, PostgreSQL, Ruby on Rails, SmartOS

**Pagoda Box, Inc** (Rexburg, ID)

*Erlang, Kernel, Web Developer/Server Administrator, 2012-2014*

Planned and developed several key pieces for this cloud hosting provider. Specialized in distributed / fault tolerant systems, Solaris/illumos based operating system internals, low-level and cloud level analytics and metrics, service discovery, and internal service messaging systems.

Accomplishments

- Technologies employed: C, Erlang, cowboy, ct, riak\_core, mnesia, SmartOS, DTrace, mdb, Ruby on Rails, JavaScript, OpenVZ, CentOS, Ubuntu, Debian, Arch Linux (and many, many more)
- Kernel development on the illumos kernel using C and other technologies.
- Open Source
  - Erlang and JavaScript WebSockets pub/sub group of services known as stormpack.  
<https://github.com/stormpack-core>
  - C driver for Erlang for reading solaris/illumos kstat metrics.  
<https://github.com/potatosalad/ekstat>
  - Research and development of custom networking kernel drivers for SmartOS, packaging, bootstrapping, and building processes.

- Ruby libraries for converting binary Erlang External Term Format to Ruby and back.

<https://github.com/potatosalad/erlang-etf>

<https://github.com/potatosalad/erlang-terms>

### **Delorum/Rejuvenation, Inc** (Rexburg, ID; Portland, OR)

*Web Developer/Server Administrator, 2011-2012*

Developed current website from wireframe drawings. Connected customer facing website to legacy warehouse software for designing 3D models of lighting fixtures in the browser. Setup hosting and deployment environment.

#### **Accomplishments**

- Technologies employed: Ruby on Rails, MongoDB, Redis, nginx, Linux, Microsoft Dynamics AX, BatmanJS
- Several backend system integrations were very heavily XML based.

### **The Church of Jesus Christ of Latter-day Saints** (Las Vegas, Nevada)

*Missionary, 2008-2010*

Learned importance of accountability and leadership skills, particularly in a remote work environment.

#### **Accomplishments**

- Became fluent in Spanish.
- While serving in an office position gained additional experience with networking, Excel, and Access.

### **MyStock, Inc** (Kennesaw, GA)

*Web Developer/Server Administrator, 2006-2008*

Mid-range stock photography company started to capture the niche market between Getty Images and iStockphoto. Getty Images eventually acquired iStockphoto and later MyStock to merge the two businesses.

#### **Accomplishments**

- Technologies employed
  - Web Framework related: Ruby on Rails, HAML, SASS, jQuery
  - Web Server related: Apache httpd, nginx, mongrel, Pound
  - Other: FreeBSD, PostgreSQL, git

### **Liberty Title Company, LLC** (Kennesaw, GA)

*Internal Web Developer, 2006*

Developed internal reporting system for legacy Mortgage software based on legacy SQL Server.

#### **Accomplishments**

- Technologies employed: Ruby on Rails, MSSQL, FreeBSD, SVN

## **Education**

**Brigham Young University - Idaho**

*Physics*, 2010-2013

**Kennesaw State University**

*Physics*, 2006-2007

## **References**

Available on request.