JAKE VAN ALSTYNE

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SUMMARY

Software Developer

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Web, iOS, MacOS
Elixir, Phoenix, Golang, Ruby, Rails, React, Swift, Objective-C, C, C++
Docker, Kubernetes, GKE, AWS

EDUCATION

M.Sc. - Computing - University of Utah   2013

- Graphics and Visualization
- Improvements to rational surface analysis in toroidal magnetic confinement fields

B.Sc. - Chemical Engineering - University of Utah   2008

- High Temperature Fixed Bed Mercury Sequestration on a Non-Carbonaceous Substrate

EMPLOYMENT

Senior Backend Engineer, Interfolio, Remote   9/2022-Present

- Elixir, Phoenix, Golang
- AWS, SQS

Senior Engineer, Mavenlink, Salt Lake City, Utah   9/2017-9/2022

- Elixir, Phoenix, LiveView
- RabbitMQ, PostgresSQL
- Ruby, Rails, React

Senior iOS Developer, Munkee Apps LLC, Sandy, Utah   10/2015-9/2017

- Feature enhancements and bug fixes for existing products
- Objective-C, Swift

Senior iOS Developer, Selfie Inc., Remote   5/2014-9/2015

- Core iOS app development. Bug fixes, feature enhancements, etc.
- Objective-C

IOS CONSULTANT, USANA, WEST VALLEY, UTAH

- Improved enterprise reporting modules in internal iOS application, created a custom tree based reporting view
- Short term contract

IOS CONSULTANT, NTT DATA, REMOTE

- App development and maintenance
- Feature enhancements, bug fixes, repository / App Store management

IOS DEVELOPER, STEM INNOVATION, SALT LAKE CITY, UTAH

- IZON iOS App Architecture
- Objective-C main app, C and C++ core modules
- Asynchronous RESTful web-service interaction
- Local/remote viewing
- Live multiple-source data streams

GRAPHICS ENGINEER, K'NOWBE WORKS, LLC, WEST VALLEY, UTAH

- Main product development, C++, Windows API, MFC, COM, OpenGL, OSG & GLSL
- I improved their core graphics engine and developed fully interactive 3 dimensional engineering design tools. I built a rapid geodata contouring package. I also built intelligent pipe laying design tools on top of proprietary equipment modeling software.
- Agile development team using TFS as our revision control and a custom in house testing harness for unit tests and TDD.

GRAPHICS ENGINEER, FLEXSIM SIMULATION PRODUCTS, OREM, UTAH

- Main product development, C++ and custom engine scripting (FlexScript)
- I was on the main product development team, tasked with maintaining and upgrading the code using C++ as my primary language and using the Windows MFC API. I made improvements to FlexSim's GUI, as well as to the core application functionality. I created a suite of performance and unit tests for the code base.

WEB DEVELOPER, SOFTWARE DEVELOPMENT CENTER, UNIVERSITY OF UTAH

- Custom web portal development
- Using JQuery, HTML, and CSS, I developed a dynamic user interface where clients could manage their accounts and design layouts for their advertising.

iOS Developer, OpCode LLC, Salt Lake City, Utah

5/2008-8/2008

- CarSplosion
- I developed the visual gimmicks, including firebombs and explosions for this mini-game using Objective-C, Cocoa-touch, Cocos2D and chipmunk-physics.

Independent & Freelance iOS / Mac OS X / Web Developer, Remote

5/2008-2015

- Designed, developed and deployed numerous iPhone and Mac OS apps for clients and independently. Submitted dozens of new apps and updates to the App Store.
- OnCue - A motion activated surveillance system for the iSight camera with remote viewing capability via the companion iOS app.
    - Full product development from concept to deployment on App Store.

Research Assistant, University of Stuttgart
Institut für Verfahrenstechnik und Dampfkesselwesen (Institute for Process Engineering and Power Plant Technology)

8/2007-1/2008

- Student Research Exchange
- I worked with graduate students to progress their research with sulfur emissions. I did various lab work and worked with typical industrial lab equipment. At one point I was given a malfunctioning BET scanner, which I repaired within a week and used to analyze soot samples for the research team.

Undergraduate Research Assistant, University of Utah

10/2006-12/2008

- High temperature fixed bed mercury sequestration research on a non-carbonaceous substrate.
- I researched mercury sequestration on a novel non-carbonaceous mineral sorbent. My results showed promise for the material, and I was invited to present at the undergraduate student competition in San Francisco at the AIChE convention in 2007.

PROFESSIONAL PROJECTS

Mavenlink

7/2017-Current

- Main Application- Professional services web application with Ruby on Rails
- Project planning, budgeting, invoicing, etc
- Integrations Platform with Elixir, Phoenix, Ecto, LiveView, RabbitMQ
- Syncing data between Mavenlink and external APIs (Jira, Quickbooks, etc)
- Kubernetes infrastructure

InstaSize

10/2015-7/2017

- A photo editing and resizing app
- Filters, Collages, Overlays, Backgrounds, etc
- In app purchases for filter packs

LOON
10/2015-
12/2015

- A video feed based social network
- NodeJS backend

BRELLA
12/2015-
3/2016

- A social link sharing app
- Built entirely in Swift, using Parse backend

SELFIE FOR iPHONE APP
5/2014-
9/2015

- An innovative social networking app for face to face conversations

ONCUE MAC OS X APP AND iOS COMPANION APP
10/2011-
Current

- Motion detection and remote video streaming
- GLSL, GPUImage

OURPLAN iPAD APP
9/2013-
4/2015

- Construction scheduling application
- Multiple Core Data stores, remote synchronization
- Custom Calendar UI / UX design / implementation

LACROSSE STATS
11/2013-
2/2014

- Sports statistics application
- Core Data, Remote data retrieval, Premium features via In App Purchase
- Custom UI / UX design / implementation

IZON iPAD / iPHONE APP
5/2013-
9/2013

- Remote video streaming application
- Core Data, P2P / Proxy Streaming
- Custom UI / UX design / implementation

OPEN SOURCE PROJECTS

SWIFTGIT

- A library for git written in Swift
- SwiftGit on GitHub

BTCMONITOR

- A simple OS X menubar application for showing current BTC prices
- [BTCMonitor on GitHub](#)

BTC-WALLET-HASHCHECKER

- A lightweight OS X command line utility for attempting rapid password permutations on a given encrypted BTC wallet
- [BTC-wallet-hashchecker on GitHub](#)

SKILLS

SOFTWARE DEVELOPER

- Objective-C, Swift, C, C++
- Elixir, Phoenix, LiveView
- Ruby on Rails
- React
- RabbitMQ
- Docker, Kubernetes, Helm, Terraform
- PostgreSQL, MySQL, SQLite
- OpenGL, GLSL

TEACHING

UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH USA

- Graduate Instructor   2011
  - CS 1400 - Introduction to Computer Science
- Teaching Assistant
  - CS 3810 - Computer Organization
  - CS 2420 - Computer Science II   2010
  - CS 2420 - Computer Science II EAE (Engineering Arts and Entertainment Track)
  - CS 1410 - Computer Science I EAE (Engineering Arts and Entertainment Track)

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RESEARCH

- Rational Surface Extraction in Toroidal Magnetic Field Simulations
- Exploration of the Material Point Method on Adaptively Refined Meshes with Hanging Nodes   2008
- High Temperature Fixed Bed Mercury Sequestration on a Non-Carbonaceous Substrate

HONORS

- Red Hanger Scholarship   2007
- Chemical Engineering John Zink Award   2007
- Chemical Engineering Departmental Full Tuition Scholarship   2006
- University Honors at Entrance Scholarship   2001