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Objective: to deliver world-class products that astound customers in function and form, as leader of a dynamic, sharp, engaged, and focused team.

Entrepreneurially minded, diversely talented, and driven software engineering professional. Extensive experience in software product engineering, leadership, management, development, deployment, and operations. Specializing in isolating development and change risks through a hybrid of component, service, and object-oriented architecture, backed by 19+ years of professional experience. Hands-on experience and continuing interest in asynchronous and distributed computing, network communications, library factoring and abstraction for component reuse. Adept at both leading development teams and contributing as an engineering team member. The ideal position would start with a challenging problem that will improve the world, combined with a smart, energetic team that has the freedom to make it happen.

Fields of Interest

- Architecture and implementation of software systems
- Entrepreneurship, measurement, and marketing
- Distributed systems, actors, and concurrency
- Object and component oriented software
- Dynamic languages and meta-programming
- Visualization and graphics
- Technical management, coaching, and mentorship
- Business roadmap, vision, and planning

2013 - 2015 Software Development Manager (SDM) at Amazon Web Services (AWS) / Amazon.com

As SDM, I lead two teams of software engineers (SDEs), owning 8 internal developer productivity tools, including multiple code browser, code review, code search, and code sharing products. All products operated at 99.9+% availability, with deep operational scrutiny for each outage or risk oversight. Targeting enterprise customers, we prioritized security, operational monitoring, workflow integrity, integration with other Builder Tools and company systems, and customer experience. Products include website and command line user interfaces, multiple supporting services, and AWS databases.

As SDE for the initial 5 months, my team delivered a popular company-wide project bootstrapping tool, helping customers focus on building their ideas by setting up all the infrastructure systems on their behalf. Over 20K projects and 100K shared libraries have been created with the tool.

TALKS
[HTML5 Platform — a 10K Foot View](#) on July, 2013 at [CS OSS Meetup Group](#)
[Meta: Programming, Objects, and Classes](#) on April, 2012 at [CS OSS Meetup Group](#)

OPEN SOURCE
py [TG.kvObserving](#)
py [TG.metaObserving](#)
py [TG.quickSilver](#)
py [TG.geomath](#)
py [TG.helix](#)
node [fate](#)

STACK
Python 2 — over 12 years
C/C++ — over 15 years
JS JavaScript, CoffeeScript
HTML5 DOM, RESTful, WebSockets
CSS3 SMACSS, Stylus, LESS, SASS
APIs OpenGL, libuv, NumPy, SciPy
AWS Lambda, SNS, SQS, SWF
DynamoDB, S3, RDS, IAM, CloudWatch
Database SQLite3, PostgreSQL, MySQL
DynamoDB, LevelDB, Redis, CouchDB

KIT
SCM Mercurial, Git, SVN
Editors VIM, MS Visual Studio
Server Nginx, Docker
Server-JS Node.js, IO.js, connect, express
Server-Py Flask, uwsgi
OS Mac, Linux, Windows, iOS

STATS
8 internal products
CodeCommit Console features
7K-25K internal customers
\$12K/month server spend
99.9+% availability
36 business goals

TEAM
2 SDE teams
2 SDE promotions, 3 hires, 2 exits
4 SDE interns hosted

KIT
Web HTML5, ES6, CSS3, LESS
AngularJS, jQuery, Ruby/Rails, Node.js
AWS DB DynamoDB, S3
RDS MySQL, RDS PostgreSQL
AWS Lambda, SNS, SQS, SWF
IAM, CloudWatch, CloudTrail
Linux Server Apache, RHEL5, ALLinux
Tools Git, VIM, tmux

2009 - 2013

CEO, Entrepreneur, Software Engineering Consultant, Co-owner at TechGame Networks

ENTREPRENEURIAL

In 2009, I returned to consulting to support a dream of creating and selling niche software products and services. Time was split between the needs of consulting clients and the multifaceted roles of entrepreneurship. Several product ideas faltered; some for lack of understanding, others due to partnership issues.

In 2012, I created Bellite.io as a software toolkit to help developers and web designers deliver hybrid desktop applications on both Windows and Mac OS X using tools they are already familiar with. After soft-launch in August 2012, I spent significant time adapting the product to customer needs and intensive learning, planning, and execution on marketing. New skills include applied analytics, metrics, A/B testing, email marketing, retargeting, advertising, IT operations, payment processing, email notification, development and administrative outsourcing. Applying these newly learned skills, I relaunched Bellite.io on the Node.js mailing list in June 2013. Later in June, to my misfortune, Google unexpectedly announced the end-of-life of Chrome Frame, which is a core component of the architecture.

CONSULTING

In order to support my aspirations, I offered consulting services on a wide range of projects within my expertise. Highlights include optimization of multithreaded TCP/UDP throughput; just-in-time x86/x64 instructions and cache level optimization for fundamentally non-parallel processes; JIT performance analysis for targeting focus of optimization; co-authoring a National Science Foundation SBIR proposal for continued JIT research; architecting, designing and building a distributed software publishing and automated updating system; an embedded linux system for translating between disparate serial monitoring protocols.

STACK

- Lang 1st** Python 2.7, CoffeeScript
- Lang 2nd** C, C++, Objective-C++
- Web** HTML5, CSS3, Stylus
- GUIs** Cocoa, Win32, WTL, ActiveX
- Misc** JSON-RPC2, libuv

KIT

- SCM** Mercurial, Git
- Pixels** Pixelmator, ScreenFlow, Motion
- Editors** VIM, MS Visual Studio 2010
- Services** Stripe, Mandrill
- Analytics** KISSMetrics, MixPanel
- Server** Nginx, Node.js
- Linux** Arch, Ubuntu
- Mac OS X** 10.6, 10.7, 10.8, 10.9
- Windows** XP, 7, 8

STACK

- Lang 1st** Python 2.7, CoffeeScript
- Lang 2nd** C, C++, JavaScript
- Web** Mustache, LESS, SASS
- DBs** SQLite, LevelDB, Redis
- Cloud DBs** CouchDB, MongoDB, Riak
- Formats** JSON, MsgPack, Pickle, XML
- Protocols** RS-232, XML-RPC, HTTP
- Libs** NumPy, Greenlet, GEvent

KIT

- SCM** Mercurial, SVN
- Tools** Parallels, LLVM, CLang, CMake
- Server** Nginx, Node.js, Flask, uwsgi
- AWS** S3, EC2, SQS, SES
- Embedded Linux** BusyBox
- Mac OS X** 10.7, 10.8
- Windows** XP, 7, 8

2009

Systems Engineer at RT Logic

As Systems Engineer at RT Logic, I contributed stability and performance improvements on a hardware product performing real-time simulation of RF signal delay and distortion for testing signal conditions encountered during aircraft, satellite and missile flights. In my second project, I assisted and supported the deployment and testing of a satellite interference geolocation system that allows operators to find the source of accidental or purposeful signal and bandwidth interference. I contributed to project design, team tool support, and adapting the software to work with RT Logic hardware from other departments. My final project involved creating a network status and control protocol in embedded vxWorks using C/C++ to interface with a new FPGA-based PCI card for high-speed signal digitization.

STACK

- Lang** C++, C#, Python 2.7
- GUIs** .NET
- Formats** JSON, XML, proprietary
- Protocols** RS-485, RS-232, TCP, UDP
- Libs** Poco, NumPy, SciPy
- DBs** MySQL

KIT

- SCM** SVN, Mercurial
- Editors** MS Visual Studio 2008, VIM
- Windows Server** 2003, 2008
- Windows** XP, Vista, 7
- vxWorks**

2005 - 2009

Lead Software Engineer at AbleLink Technologies

Lead developer of more than 10 Phase Is, 5 Phase IIs, and 2 FastTrack research grants for the Department of Education and the Department of Health and Human Services focusing around the topic of technology accessibility for the cognitively disabled. SBIR grants help fund high-risk project research and development from small businesses, and are generally very fast-paced software engineering projects with research-vetted results. During the second phase of these research grants, we transformed preliminary studies into feature rich commercially-available products tailored for the cognitive disability market. Combining the gamut of delivery platforms with the ease of use required for our primary cognitive disability audience proved very challenging and rewarding, fostering expertise in a wide variety of languages and technologies from cloud to embedded platforms.

STACK

- Lang 1st** Python 2.4, 2.5, 2.6, 2.7
- Lang 2nd** C, C++, Smalltalk, ActionScript
- GUIs** .NET, wxWidgets, QT4, QT5
- DBs** SQLite, Filesystem
- OODBs** QuicksilverDB, ZODB
- Services** Amazon S3
- Web** HTML5, CSS3, Jinja2
- JS** JavaScript, CoffeeScript, jQuery
- Formats** JSON, Pickle, XML
- Standards** OpenGL, OpenAL
- Libs** NumPy

KIT

- SCM** Mercurial, SVN
- Tools** Parallels
- Editors** VIM, MS Visual Studio 2003
- Windows** XP, Vista, 7, 8
- Windows Mobile** 2003, 5, 6
- Mac OS X** 10.6, 10.7, 10.8
- iOS** 3, 4, 5

2003 - 2005 **Software Engineering Consultant, Co-owner at TechGame Networks, LLC**

Launched the company with two partners with the intention of developing software and systems products. During this time frame, my primary role was executing on consulting services for clients. I continued working with Redstone to perform custom engineering and integration services for the City of Los Angeles security center and the Ontario International Airport in California. Consulted for Agilent Technologies to assist with C++ threading integration problems, as well as a new OpenGL rendering components. Began consulting for AbleLink Technologies, assisting their SBIR research grants for helping people with intellectual disabilities through software.

STACK
Lang 1st Python 2.3, 2.4
Lang 2nd C, C++, Smalltalk
GUIs wxWidgets
Standards OpenGL
Formats XML
KIT
SCM SVN
Editors VIM
Windows 2000, XP, Vista
FreeBSD 5, 6, 7

2002 - 2003 **Principal Systems Engineer at Redstone Integrated Solutions**

Led the team that architected, designed, implemented, and delivered a flexible and customizable security monitoring and control application. This system was then customized and integrated into the police operations center of the Ontario International Airport in California. As configured, the system monitors and controls 30 cameras simultaneously, allowing switching among 200 cameras, manages a sensor network of over 3,000 alarm points, and enables centralized point-and-click control of field devices such as door locks.

STACK
Lang Python 2.2, C, C++
GUIs wxWidgets, ActiveX
DBs SQLite, OODB
Standards OpenGL, SVG
Protocols RS-232, TCP, UDP
Formats XML, SVG
KIT
SCM SVN
Editors VIM
Windows 2000, XP

2001 - 2002 **Software Engineer at ICCE Technologies**

Co-architected a distributed software system to provide access, control, and event propagation for geographically distributed hardware. My primary role was framework development, including application skinning, Jabber communications, services, and automation toolkits. The flagship ICCE Vision Application was built upon the application toolkit framework, enabling a fully-customized, cross-platform skin user interface, communicating to distributed hardware over Jabber.

STACK
Lang Python 2.1, 2.2, C, C++
GUIs wxWidgets
Protocols XMPP, RS-232, TCP & UDP
Formats XML, proprietary
KIT
SCM CVS, SVN
Editors VIM
Server Jabber
Windows 98, NT 4, 2000, XP

1996 - 2001 **Software Engineer at Decision Science Applications (SM&A, Emergent)**

Contributing developer on more than 12 successful HP/Agilent Technologies products, including design and implementation of two interactive scientific graphing components, interaction-based calculation algorithms, and infrastructure design and construction. During my capstone project at Emergent, I served as both a software architect and a key developer for Agilent MUI, including system design, framework and infrastructure, data management, algorithmic development, and graphical interfaces.

STACK
Lang C, C++
GUIs MFC, WTL, ATL, ActiveX
Protocols HPIB, GPIB, RS-232
DBs MFC Serialization, MS SQL Server
KIT
SCM MS Visual Source Safe
Editors MS Visual Studio 6
Windows 3.1, 95, 98, NT 4, 2000

1998 - 2000 **Bachelors of Science in Computer Science at University of Colorado**

Minor in Mathematics. Minor in Economics.
First in Class. (GPA: 3.982; GRE: 790/800/640)
Outstanding Undergraduate Student from the College of Engineering and Applied Science.

STACK
Lang LISP, Scheme, Pascal, C, C++
Network BSD Sockets, TCP
Graphics OpenGL, DirectX