Fullstack Generalist Software Engineer

Engineer Toolkit

Git

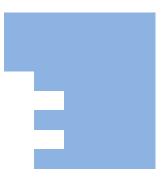
Distributed *nix Systems

Agile Development Algorithm Design

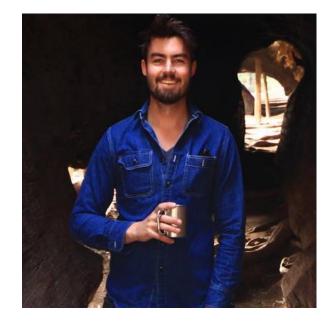
Object Oriented Programming

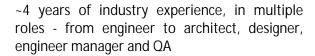
System Design Testing

Code Reviews



Product Design





Five years of substantial student leadership experience at the University of Toronto.

Excellent English communication skills. I document and leave comments!

Hardworking, goal oriented, extremely adaptable, driven and committed, able to cope and learn in a fast-paced environment.

Excellent time management skills. Able to work effectively in a team and autonomously.

Experience in team leadership. Capable of handling criticism constructively.

Product Design Experience Design Engineering Management	
Stack Acumen	
HTML	
CSS	
D3.js	
Angular	
Backbone	
CoffeeScript	
Android	
REST & RPC API design	
Node.js	
PHP	
Python	
Java	
Natural Language Processing	
Machine Learning	
Lucene	
Statistics Matlab	
Redis	
Consul	
Cassandra	
MongoDB	
CouchDB	
MySQL	
Neo4J	
DevOps	
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EMPLOYMENT

• <u>Pantheon:</u> Software Engineer Apr 2014 - Current Twisted Python, Cassandra, Backbone, Coffeescript, Chef, Ruby, Kibana, Logstash, Go

- **§** On the "Mission Control" team, building the platform that keeps the Pantheon platform the fastest and most resource-efficient product in its market. Responsible for designing and implementing the API, data models, backend business logic, schemas, technical scoping of new feature, such as rewriting the internal Cassandra indexing logic, developing the metrics pipeline, creating platformwide data analysis models, and the platform-and-payment-abuse prevention system
- **§** Dedicated product touchpoint, helping to identify business requirements, drafting them into product proposals, and turning them from feature specs, into tech specs, into stories and tasks and in some cases, implementing them.
- § Implementing server health checks, client and dashboard front-end work. Onboarding new employees in Europe and Africa.

Zynga: Software Engineer,Senior Software Engineer

Aug 2012 - Feb 2013

Feb 2013 - Oct 2013

PHP, AS3, Javascript, PHP, CouchDB, Lucene, Octave

- § Internationalized Zynga Poker into Arabic.
- § I built Zynga's profanity filter ... in 20 human-languages. It is sophisticated yet incredibly efficient, comparable to some of the more advanced solutions in the market. It uses machine learning and clever NLP to make it extremely lightweight. This was done in AS3, JS, and PHP
- I also designed and built most facets of Zynga's in-house translation management system. It's implemented in PHP written on top of CouchDB. Early versions used Lucene, but I've since wrote our own, focused & lightweight search solution.

In an effort to make the computationally expensive work more efficient, I built a PHP job distributor/scheduler that can spread work across a cluster of machines - most comparable to a very simplistic map-reduce implementation.

The strings to be translated are written to readily available files, accessible by a slick front-end I built, where non-technical contractors can view/download the completed files with ease, and upload the same once they are ready to commit changes. The changes are pushed right into the original database, automating many of the previous game engineer task and simplifying everyone's life. This work has resulted in many, many wins for the International team at Zynga, and is being adopted to become the content management system for games company wide, irrespective of the internationalization wins. Helped lead the tools pod of Zynga International.

IDT Canada: DSP Engineering Intern, Toronto, Ontario May 2010 – July 2011

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- § I built and tested the top level virtual chip model of a video processing chip for an Android TV. In the process I created a GUI which was easy to use, yet offered total control of the model. This module of software has been carried forward into all descending projects in development.
- § I evaluated the performance of a different production-ready video processing chip, and identified required improvements. Communication within the team in this procedure was key. I was also responsible for organizing and running demos for potential customers. My work was instrumental in securing the acquisition of our department by Qualcomm.
- I was solely responsible for creating the company's performance Blu-Ray benchmark. I created synthetic content and organized and executed all aspects of a film shoot to gather live content. I planned, directed, edited and colour graded live content. There were stringent requirements the content had to play to our strengths while also playing to our competitor's weaknesses. The final product is being released for distribution at CES 2012.
- Gowling Lafleur Henderson LLP, Toronto

Summers of 2006, 2007 and 2008

§ Worked in the Copy Centre and Records Management departments, meeting strict requirements.

EDUCATION

2014-2014

- Codepath Android bootcamp
- Highly intensive, 8 week Android training camp, learning how to develop for mobile by way of assignments, lectures, labs and a cumulative project

2007-2012

<u>The University of Toronto</u> – H.BSc in Computer Science, specializing in Artificial Intelligence with a minor in Mathematics

A brief summary of the most interesting projects I was involved with were:

- Wrote and coded machine learning algorithms, which performed automatic handwriting recognition, facial recognition, and navigational pathfinding. This was done using supervised and unsupervised machine learning techniques.
- Developed a program to determine semantic and causal relations between words by processing raw text from a corpus using Natural Linguistic Processing techniques. This software can be applied to global trend analysis.
- Made a banking simulation website in JSP and the Struts framework which ran on a Tomcat server, which interacted with a JDBC database.
- Built a speech recognition model which could determine who was speaking and what was said. This was done via building a predictive model and then training it on real-world data.
- Made an instant messaging client, where two or more users could communicate through networked computers, by interacting with a server, where the client sent/received data to a server. This was done in two courses, once with compiled C files, and another using AJAX and Struts, running over Tomcat
- Created an application by which the Kinect could control a desktop computer via the user's physical movements.

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EXTRA-CURRICULAR INVOLVEMENT

- Part Time Student Director, Woodsworth College Student Association (WCSA), University of Toronto 2011 2012
 - § I was in charge of focused outreach to the college's many part time students. I organized events, as well as a luncheon series.
- Arts & Entertainment Section Editor, The Howl (A newspaper at U of T)

2011 - 2012

- I ran the Arts and Entertainment section. I organize the contributors and was responsible for coming up with ideas for/contributing/gathering content.
- Peer Mentor, First Year Connection Program at Woodsworth College

2011 - 2012

Varsity Blues Athlete – Mountain Biking

2010 - 2012

President and founder of the Woodsworth College Climbing Club

2008 - 2012

- § I lead outings to climbing gyms across Toronto, as well as teaching new members how to climb
- Writer, photographer and layout editor for "The Howl"

2008 - current

Head Orientation Leader, WCSA

2008, 2009, 2011

- § I lead the leaders as well as the first years, working effectively as a team leader in addition to helping to organize the week itself. I was awarded for being an outstanding leader.
- Vice President of Public Relations, WCSA, University of Toronto

2009 - 2010

§ In addition to posters and newsletters, I was also responsible for maintaining the website. I spearheaded a movement to acquire a mascot. I also helped organize some of the events. I gained a lot of one-on-one exposure through this.

AWARDS

- Glowing Globe Award, Zynga International Quarterly Award, 2013
- Microsoft People's Choice Award, Level Up Student Gaming Showcase, 2012
- Project of the Year Runner Up, Level Up Student Gaming Showcase, 2012
- Gordon Cressy Student Leadership Award, 2012
- Woodsworth Lifetime Achievement Award, 2012
- Contributor Of the Year, The Howl, 2012
- Outstanding leader award at Woodsworth Orientation, 2011

INTERESTS

- Writing, playing and recording music
 - I have been an avid musician for more than seven years, playing jazz and more recently ambient/post-rock music. I have recorded and produced two records showcasing my work, in addition to playing The Drake Hotel in Toronto. This has given me proficiency in Ableton Live, and Sound Forge, as well as improving my public performance ability. I have a record on iTunes, Spotify & Rdio!

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Improv Comedy

Performing improv comedy is the epitome of collaborating and working with a group. Having practiced intensely, I've learned how to pay very close attention to the interactions between two people, and how to feed information to fellow actors communicating clearly in (non-)verbal ways. It's also forced me to embrace ambiguity in some circumstances, and explore different paths in the cloud of possibilities, embracing failure, and taking lessons learned from every situation which arises on stage.

Travelling

- § I am fortunate to have had the opportunity to travel extensively, through North America, Europe South America, Oceania and Asia. This has given me a global perspective and awareness, thorough planning skills, and the ability to think on the fly under pressure
- Photography, film, matte painting
 - § I enjoy photography and on occasion utilize that skill to create matte paintings. I am also interested in film. This has given me proficiency in Photoshop, Final Cut Pro and Premier. I have won a photography contest at First Canadian Place.
- Mountain biking, rock climbing, big mountain skiing
 - **§** These sports have taught me a lot about the values of commitment and perseverance, and have encouraged me to always look for a unique and inventive solution to a challenge, as well as the confidence to push myself out of my comfort zone.
- Home Brewing
 - § I've started to brew my own beer. The experimentation with flavours has forced me to think creatively in ways I've never had to before. Every batch has turned out fantastically.

REFERENCES

Available upon request