James King

Polymath Provocateur

Interests and Research

Formal Methods

I am interested in modelling software systems using specification languages such as TLA+ in order to better understand systems I design and to check their correctness. I am still learning and looking for opportunities to use it in my every day work.

Programming Languages

I am an active contributor to the Hy language and gave a presentation on it to PyconCA in 2013. I've undertaken research in distributed programming languages by implementing the BloomL language in Python which I gave a presentation on at PyconCA 2012.

Cloud Computing

I have been a contributor to the OpenStack Cinder and Astara projects and have experience deploying OpenStack as well as developing monitoring and administration tools around it.

Languages

Python	**Expert**	*Advanced knowledge of AST, contributed to development of a Lisp-like front-end language and alternative interpreters. Technical reviewer on* Distributed Programming in Python *by Pakt Publishing due out in 2016.*
C	**Advanced**	*Familiar with C89, C99, and modern tools and practices. Capable of contributing kernel modules and user-space applications.*
Common Lisp	**Intermediate**	*Versed in more advanced features like CLOS and MOP. Can dissassemble code and debug implementation issues. Could write eval.*
C++	**Adept**	*Familiarity with STL, common design patterns and idioms. Minor contributions to sizeable C++ codebases such as Firefox.*

Tools

RDBMS	PostgreSQL, MySQL	Web Servers	Apache, Ngninx, Lighttpd
NoSQL	Redis, Riak	Web	Django, Flask, Pylons, Pyramid
Networking	Twisted, Tornado, eventlet	Cloud	Cinder, Nova, Tempest, Swift, Neutron, Astara

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Platforms	Intel x86, x86_64	OS	OSX 10.7+, Windows 7, Linux 2.6+

Talks and Presentations

Distributed Programming in Python: A Model for Strong Eventual Consistency
- http://bit.ly/TGumDX

Hy: A Lisp That Compiles To Python
- http://bit.ly/18ipgc3

Castle Anthrax: Dungeon Generation Techniques
- http://bit.ly/1kvPjNT

Scaling Python
- https://www.youtube.com/watch?v=oE2YxsHPIfA

Experience

Vocational

2014-Present **Cloud Consultant**, *Dreamhost*, Remote.
Various duties:
- Maintenance, development, and packaging of core Openstack components
- Design and develop key features such as utility billing and metering

2013-2014 **Contract Developer**, *SwiftStack*, Remote.
Various duties:
- Maintenance, development, and packaging of core Swift web controller
- Maintenance, development, and automated deployment of swiftstack.com

2012 **Senior Developer**, *Internap Network Services*, Remote.
Software developer on the cloud development team specializing in Cinder block storage.
Detailed achievements:
- Integrated Cinder into production

2011-2012 **Senior Developer**, *Polar Mobile*, Toronto.
Software developer on the API team.
Detailed achievements:
- Developed a test-driven culture
- Provided mentorship to interns and junior team members

2010-2011 **Senior Developer**, *Panometrics Inc*, Toronto.
Managed a legacy development project.
Detailed achievements:
- Increased application uptime
- Replaced several legacy code paths

2008-2010 **Software Developer**, *Digisphere Inc*, Toronto.
Distributed application development and web application development.
Detailed achievements:
- Designed task processing system that processed large images across n-nodes
- Scaled web application up to millions of unique impressions every month
- Implemented search engine solution that crawled through >5M images

2004-2007 **Software Developer**, *Misc*, Toronto.
Further history available upon request.

Interests

Board games	I'm a huge gaming nerd and I have a collection of 30+ board games and table top RPGs.
Game Design	I've developed my own table top RPG supplement and develop video games and demos using a variety of languages and tools
Rock Climbing	Multi-pitch sport and bouldering
Running	I've ran the Warrior Dash 2011 and Spartan Sprint 2012