Mark Hibberd

software . language agnostic . quality focused

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Overview & Proposition

Highly skilled, professional software developer. Language and technology agnostic with a deep understanding of computer science and sustainable development practices. Focused on building composable systems from small, clean, simple code.

Technical expertise that has repeatedly been put to the test building and delivering reliable, highly scalable systems. Automation, rigorous testing, continuous integration, a disciplined approach to software development and strong communication skills have contributed to successful projects for many customers.

Able to work with and build strong, high-functioning teams, providing technical mentoring whilst communicating with product management and customers to deliver the right product, the right way.

An excellent fit to work with a quality focused team, helping to build critical systems for growing, forward-thinking companies, who want passionate, disciplined developers to build them successful software.

Highlights

- Developed mission-critical services for Symantec's consumer products. Serving over 35 million requests a day, this development dealt with the reliability and scalability issues inherent in high-volume, high-transaction environments.

- Developed high performance Elliptic-Curve mathematics library used to implement Elliptic-Curve Cryptography for RSA. This development incorporated several new and innovative algorithms covering three pending patents for which I am a co-inventor.

- Design and implementation of scalable application infrastructure for distributed and disconnected environments that has been deployed on US Coast Guard cutters. This work included customer consulting and training for Lockheed-Martin and the US Coast Guard.

- Rapid, iterative, open-source product development with Leapstream. Collaborated with consulting teams to deliver key features that made a significant difference to Leapstream's ability to produce high-quality software, quickly and reliably.

Recent Experience

Symantec

Senior Software Engineer **Sep 2009 – Present**

Development of secure licensing services for Symantec. High-volume transaction processing: over 35 million requests a day; more than a 100 terabytes of online data.

Directly responsible for automated deployment solution that significantly improves the teams ability to deliver rapidly and reliable.

Instituted monitoring of a number of quality metrics, resulting in a 40% increase in code coverage, a 10% reduction in code duplication, 12000 line reduction in code size whist still delivering new features, and a corresponding reduction in bugs for the major 2010 release compared with previous releases.

Netstorm/CoastalComms/CoastalWatch

Software Consultant **May 2009 – Jun 2009**

Short term contract. Design and architecture of meteorological data service platform. Focus on reliable and timely acquisition, modelling and delivery of large volumes of data for both scientific and media consumption.

Leapstream

R & D / Software Consultant **Apr 2008-Apr 2009**

Open source and product development; enterprise consulting; Agile/XP coaching and training for sustainable development. Developed the scoreboard, a radiator for build monitoring and system monitoring - [http://www.assembla.com/wiki/show/peeble]. Significant contributions to the boost library [http://boostalicious.org/], leading development on the spider, an inversion of control container, and scalpel, a dynamic system edging tool.

RSA / EMC

Senior Software Engineer / Technical Lead **Aug 2006–Apr 2008**

Designed and implemented Java security toolkits, dealing with cryptography, certificates, PKI and SSL/TLS. High quality and performance focus. Innovated in Elliptic-Curve algorithms. Provided technical leadership for multiple projects, leading a team of five developers to successful projects.

Mincom

Software Engineer **May 2004–Aug 2006**

Developed clean-room Java infrastructure dealing with distributed applications over unreliable networks and data access for Mincom's defence customers. Customer consulting and training in the US and Australia.

Academic History

In Progress - Doctorate of Philosophy (PhD)

Queensland University of Technology (QUT) **Jun 2006–Present**

Research into debugging of declarative languages, specifically logic-based model transformation languages. This research investigates developers mental-models with respect to debugging and presents bug localisation techniques optimised to addressing these models. This work is approaching completion, having commenced significant work on the thesis.

Preliminary work has been published and presented at the MoDELs 2007 conference.

> Hibberd, Mark T. and Lawley, Michael J. and Raymond, Kerry (2007) Forensic Debugging of Model Transformations. Proceedings 10th International Conference, MoDELS 2007: Model Driven Engineering Languages and Systems.

Bachelor of Information Technology with Distinction (Software Engineering)

Queensland University of Technology (QUT) **Mar 2002–Nov 2004**

Graduated with Distinction, obtaining a GPA of 6.33.

Areas of Interest & Expertise

- Unix, specifically FreeBSD, the right tools are integral to productive software development.
- System administration. I thoroughly enjoy the disciplined zen of system administration and support a number of servers in my free time.
- Performance myths, debunking overly complex and unnecessary programming constructs with better design and algorithmic improvements.
- Application usability, specifically programmatic interfaces and patterns.
- Music, it is off topic, however I live for good music, and attempt to play the guitar.

Referees

Available on request.