

# Mark Hibberd

Experienced software developer, architect, engineering manager and international speaker who values working with teams focused on delivering working software that actually gets used.

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## HIGHLIGHTS

Built *Ambiata's* technology group from the ground up. Moving Ambiata from 6 people to 35. Delivering a high-value customer attribute product that utilises large scale machine learning systems to drive better customer decisions for a number of the largest companies across banking, insurance, retail, media and telecommunications both in Australia and overseas.

Drove *Ephox's* transition from a client-side editor company to a broader content services company. Building and leading *textbox.io* from its inception as *Ephox's* first hosted service to what has since become a core component of their business.

Developed mission-critical services for *Symantec's* consumer products. Serving over 35 million clients a day, this system provided the challenges of wrestling legacy software to a better state within the constraints of the reliability and scalability issues inherent in high-volume, high-transaction environments.

Innovated in the development of high-performance elliptic-curve cryptography libraries for *RSA*, covering several new and innovative algorithms, including co-authoring a patent for novel performance optimisations (US8498411)

## EXPERIENCE

### **Kinesis, Sydney** — *Chief Technology Officer*

NOVEMBER 2017- PRESENT

Chief Technology Office, responsible for building out a first-class urban-planning, carbon modelling and sustainability analytics platform.

### **Ambiata, Sydney** — *Chief Technical Architect*

DECEMBER 2012 - NOVEMBER 2017

Head of Technology at Ambiata. Working with Ambiata from its earliest days, I have built out a successful team from an initial 3 developers, to a group of four teams, including 18 engineers and 5 data-scientists, in that time helping Ambiata grow from 6 people to 35. In my time at Ambiata I

## SKILLS

Building and Delivering  
Quality Software

Building Technically Strong,  
Deliver Focused Teams

Cloud & Cost-Aware  
Architectures

Distributed & Reliable  
Systems

Functional Programming

Security & Cryptography

## TALKS

**Lab to the Factory: Robust  
Machine Learning Systems**  
YOW! 2016 Melbourne,  
Brisbane & Sydney

**Turning Technical Debt into  
Monetary Debt: Price Aware  
Architecture** YOW! West 2016

**Failure; or the Unexpected  
Virtue of Functional  
Programming** Keynote, YOW!  
Lambda Jam 2015

**Towards Annex: A Fact Based  
Dependency System** CUPP  
2014 & Strangeloop 2014

**Programming in the Large:  
Architecture and  
Experimentation** YOW! 2014  
Melbourne, Brisbane &  
Sydney

focused on delivering and improving a high-value customer attribute product that utilises large scale machine learning systems to drive better customer decisions for a number of the largest companies across banking, insurance, retail, media and telecommunications both in Australia and overseas.

At Ambiata I covered technical responsibilities such as product architecture, security and operations as well as business and people responsibilities including product management, strategy, operating budgets and ensuring I have a happy team who can do their jobs.

### **NICTA, Sydney — Chief Technical Architect at Ambiata**

DECEMBER 2012 - SEPTEMBER 2014

Ambiata was incubated at NICTA, whilst there I assisted in initiating NICTA's functional programming courses, developing course materials (<https://github.com/data61/fp-course>) and presenting introductory and advanced functional programming courses a number of times around Australia.

### **API Engine, Brisbane — Attempted Founder**

AUGUST 2012 - DECEMBER 2012

API Engine was a collaboration with three colleagues to try to bootstrap a product company. Ultimately we were unable to gain enough traction to continue, however we did manage to build a number of interesting API management tools, and whilst the financials did not work out in the end, the design and positioning of the tools, which were quite novel at the time, has been proven out by a number of successful products such as Apiary, Mashape and Amazon's API Gateway offering.

### **Ephox, Brisbane — Lead Engineer**

AUGUST 2010 - NOVEMBER 2012

Led development on Ephox's products. Guiding teams of between 5 and 10 people, I repeatedly delivered on product releases, delivering 2 new products, as well as 3 major releases for existing products. During this time, I helped Ephox transition from a client-side only editor company, to a company that could deliver a variety of hosted services, in particular driving textbox.io from its inception which was Ephox's first hosted service and has since become a core component of their business.

### **Symantec, Sydney — Senior Software Engineer**

SEPTEMBER 2009 - AUGUST 2010

Development of secure licensing services for Symantec. High-volume transaction processing; requests from over 35 million clients a day, and more than a 100 TiB of online transactional data. Directly responsible for driving automated deployment improvements that had a significant impact on the team's ability to deliver. Was able to make a significant impact moving parts of Symantec's large legacy systems forward, concretely driving a 40% increase in code coverage, 10% decrease in

## **TECHNOLOGY**

I value operational simplicity, and sit on the conservative end of technology choices. I avoid moving parts, and tend towards tried and tested solutions. I rely heavily on FreeBSD and Linux, and the tools they provide. I believe strongly in cost-aware architectures, which often drives my decisions around technology choices and where to expend operational budgets and infrastructure development efforts.

## **LANGUAGES**

I am language agnostic, and I rely on my background to adapt to any environment. Given the choice, I prefer languages that compile to native binaries, and where circumstances allow I tend towards functional programming. This often leads me defaulting to one of, Haskell, C or Shell, depending on the task.

I have significant professional experience with Haskell (Ambiata, NICTA, API Engine, Ephox), Scala (Ambiata, Ephox), JavaScript (Ephox), PureScript (Ambiata), Java (Symantec, Leapstream, RSA, Mincom), C (Ambiata, RSA), COBOL (Mincom) as well as a variety of tertiary languages and technologies that make the world go around.

duplication, 20% reduction in code size, whilst still delivering new features with a demonstrable reduction in defects.

### **Netstorm, Brisbane — *Software Consultant***

MAY 2009 - JUNE 2009

Collaboration with Netstorm on the design and architecture of a meteorological data service platform over NOAA data-sets. Focus on reliable and timely acquisition of data, modelling and delivery of large volumes of data for both scientific and media consumption.

### **Leapstream, Brisbane — *R & D / Software Consultant***

APRIL 2008 - MAY 2009

Leapstream's focus was on building high-performance development teams, my role was driving this goal through open-source and internal product development of tooling; software consulting (in particular with organisations trying to bootstrap teams); agile/XP coaching; and training around sustainable development practices.

### **RSA / EMC, Brisbane — *Senior Engineer / Technical Lead***

AUGUST 2006 - APRIL 2008

Designed and implemented security toolkits dealing with cryptography, PKI and TLS. High code quality and performance focus. Innovated in Elliptic-Curve Cryptography, covering several new and innovative algorithms, including co-authoring a patent for novel performance optimisations (US8498411). Provided technical leadership across multiple projects, leading up to five developers.

### **Mincom, Brisbane — *Software Engineer***

APRIL 2004 - AUGUST 2006

Distributed / disconnected systems infrastructure design and implementation. Worked with partners around the world including the US Coast Guard and Lockheed-Martin to build, test and deploy our systems on cutters with extended low or no connectivity operations in the arctic.

### **Blur Technology, Brisbane — *Owner***

JANUARY 2002 - JUNE 2005

Web development, hardware sales & installation, system administration.

## **EDUCATION**

### **Queensland University of Technology, Brisbane — *Bachelor of Information Technology with Distinction***

MARCH 2002 - NOVEMBER 2004

Graduated with Distinction, obtaining a GPA of 6.33 (max 7.0).