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British Citizen / New Zealand Permanent Resident

1 Summary

- Led, designed and delivered *at scale* solutions for leading brands since the early 2000s
- Built big data/low latency solutions for BBC i-Player, Morgan Stanley, NTT, Spark's Spotify Integration
- Specialised JVM/Node full-stack polyglot (EAI/DDD/BDD/TDD/Microservices/Frontend)
- Strong generalisations across immutable infrastructure, linux, datastores, security
- Provided direct technical and architectural coaching for multiple teams
- Successfully mentored/championed/partnered with my teams to achieve full cross-functionality, user-engagement and continuous delivery
- Champion of user empathy, a common business language, fast-feedback, automation and continuous improvement
- Always improving craftsmanship of myself and those around me
- Experienced Agilist with a preference for Kanban and Lean
- ICAgile Certified Coach. Working with Katherine Kirk on her Leadership Insight Lens and book
- Iteration Master on a large transformation for New Zealand's Prime Minister and Cabinet Office, working with the Cabinet Secretary
- InfoQ.com News Editor, Code Club Teacher, DevOpsDaysNZ organising team, speaker at meetups and conferences

Implementation Languages:	Java, node.js, Scala, Ruby, Perl, Python, C
Datastores:	PostgreSQL/RDS, MongoDB, MySQL, Asset Control, memcached, S3, JCR
Platforms:	Docker-Compose, Vagrant, Hashistack, ElasticStack, AWS(EC2, ECS, S3 Lambda), Puppet
JVM Frameworks:	Springboot, JPA/Hibernate, CucumberJVM, Play, Karate, Camel, Spark, AEM, Alfresco
Node Frameworks:	Express, Sequelize, React/Redux, GraphQL, Mocha, Cucumber.js, canned

2 Experience

- **Mporium PLC - via Dreamthought UK Ltd** London
Consulting at public-data-driven ads Startup *July 2018 - January 2019*
 - **FullStack Engineering, Data engineering and AWS DevOps** - Engineering in a start-up means that I have sharpened my **build it, test it, ship it, own it** mentality, whilst also exercising my **polyglot** tools through working on a **Springboot, Storm, Spark, node and AWS** stack. I delivered stories around **configuration management, database optimisation, data manipulation, repeatable performance benchmarking and data observability**. I delivered a containerised Gatling(Scala) suite for Storm, and also span-up Cloudwatch, Grafana and Elastic Stack instances and dashboards. I was relied upon by the business to help craft SparkSQL queries due to my approachability.
 - **Agile and lean development coaching** - Basing my approach on Katherine Kirk's insight lens, I **succeeded in raising the technology teams situational awareness**, in an environment of rapid change and unclear boundaries. The coaching tools I bring to an organisation enabled me to target workshops, so that my teams would have a way forward when otherwise blocked. Examples included running **workshops** to define a **testing strategy, domain modelling, Five Why's to learn from failures, specification by example with stakeholders, risk elicitation, architectural**

roadmapping and retrospectives. I also targeted increasing levels of individual trust to bridge business-technical alignment.

- **Facilitation, Mentorship and knowledge transfer agent** - I help organisations surface white-elephants and address them. I went to work on issues around single points of failure within the business, through running appropriate **brown-bags and active knowledge transfer** sessions. These upskilled the team in targeted areas of engineering, as well as actively transferring product knowledge hidden within individuals. As an experienced Mob Programming coach, I help teams to become more **cross-functional and collaborative**. This led me to run well-received hands-on **mob-programming mini-hackathons** where **team members across different skill-sets co-TDD'ed Spark and Storm solutions, demystifying our data-science stack**. Keen devs enjoyed my **Clean Code and Code Smells** sessions. I also derisked temporary **remote devs** through online group peer-review and walk-throughs. Where we had confusion around Agile and lean principles I created a course based on ICAgile's learning tracks for internal delivery. All this and **mentorship** of the Scrum Master Where we had confusion around Agile and lean principles I created a custom course, based on ICAgile's learning tracks.
- **Collaborated with new CTO** - On arrival of our CTO, I partnered in planning and running workshops to **reboot the teams through a new Sprint 0 and elicited Agile working agreements**.

Experience: AWS, ECS, Lambda, Java, Spring, Auth0, Spark, Scala, Hypothesis-driven development, Coaching, mentoring, facilitation, working with uncertainty, Scheduled Lambdas, Gatling, Docker-compose, couchbase

• Bank of New Zealand

Wellington, NZ

Technical Design Lead for Partner Banking

Jan 2018 - June 2018 **DEATH OF MUM IN UK**

- **Technical coaching and leadership of teams** - I work hard to ensure that organisations always benefit from the experience I've acquired in the past. My experience with architecture, design and individual coaching empowered me to serve and support my teams in **API contract design, microservice design, experimentation**, moving to **springboot**, developing **React/Redux** front-ends, applying the **testing** pyramid and exercising **DevOps patterns**. I champion **DDD** and helped two teams through running domain-modelling session to arrive at clear understanding of their problem domain and a shared language with the business; this also fed into their testing and API design. I believe in flow and helped a team break out of a design-stalemate.
- **Member of the leadership team** - When lead through partnership and collaboration. At BNZ partners I was a technical design lead across 8 teams totalling about 60 developers, testers and designers. In my short time there, I successfully partnered with business, design, architecture and usability leaders in supporting and growing newly product-centric teams; one of which was the first to break out of their monolith. I led independent product-teams (not project) within a Spotify model, applying customer centricity and microservice architecture techniques. I **helped talented engineers on my teams become champions, be heard and succeed**. I served **locally autonomous teams in validating hypotheses** and iterating rapidly.

Experience: Coaching, product teams, architecture, recruitment, kafka, OpenShift, Swagger/OpenAPI, Java, Spring, React, Scala, Radar, Hypothesis-driven development, mule

• Fairfax Media Ltd

Wellington, NZ

Technical Coach and Lead

May 2015 - Jan 2018

- **Technical Coach with a remote content discovery team** - Remotely led a team innovating in the space of making content more discoverable through the use of **NLP** and API integrations. Feature-flag integration with platform. Stakeholder collaboration and a live performance analysis. Discovered an indirect impact on poorly scaling legacy platform. Also migrated UI to Angular with appropriate testing.
- **Technical Lead of Web Experience Team** - Hands on leadership of a team of front-end developers, with a focus on instilling early validation, Continuous Delivery, engineering and testing values. We delivered a fast **universal React/Redux/GraphQL** replacement for a previously server-side rendered Java news article.

- **Agile Technical Lead and Coach for Video Team** - Hands-on lead of a team delivering solutions within the bounded context of **video delivery and ingest**. Succeeded in moving from weekly and brittle releases within a monolith to the **continuous delivery of EC2 and containerised microservices** designed and architected through **ATDD/London-school TDD** and **mob-programming across 6 cross-functional engineers**. Guided the team through stakeholders in defining behaviour for **BDD and applying the testing-pyramid**. Coached in use of **test-doubles**. Actively paired with team members. **Scala** used for driving **Gatling** tests of legacy app.
- Technical Domain owner for video, interacting with multiple teams, in the spaces of content navigation and syndicated content partnerships.
- **Member of leadership team** - Partnering in providing technical leadership, coaching Agile development and software engineering practices across a large number of self-selected, co-located, remote and vendor teams, within a rapidly evolving emergent architecture. Mentored and steered emergence, providing direct technical coaching at individual and team level. A dynamic and transparent environment with in-team 360 reviews. Successfully guided my teams towards continuously delivering value-slices, as microservices or atomically deployable and deliverable components.
- Guiding teams towards solutions to break behaviour away from a friction-fraught centralised monolith.
- Championed and succeeded in making node.js a first-class language on our stack. This has resulted in delivering more natural team cross-functionality, quality delivery and greater participation in platform ownership.
- Championed LeanUX practices, introduced editor/user observation, helped with self-selection and supported squads. Formed DevOps and Software Craftsmanship Guilds.

Experience: Technical coaching, recruitment, continuous delivery, Kanban, self-organising teams, team self-selection, emergent architecture, Scala, Node.js, AWS, Lambda, React, Docker/Compose/Jet, user-observation, Consumer Contracts, Lean UX, Swagger, Java, OSGI, JAX-RS, Elastic Search, Docker, Vagrant, Building Technical Radar, Hypothesis-driven development
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Catalyst IT Ltd

Wellington, NZ

• *Senior Software Engineer, Solutions Architect and Iteration Master*

Oct 2013 - May 2014

- **Iteration Master and Senior Java Engineer** on an Alfresco based Agile project for New Zealand's Prime Minister and Cabinet. Collaborating with a parliamentary Product Owner value-team, I was involved in a Scrum-master like function to deliver a document management solution. I led Agile ceremonies and fostered a spirit of continuous improvement, mentoring in Agile practices. Championed principles of BDD and test automation in an environment with traditional documentation and manual testing biases.
- **Solutions Architect** - High profile tender project for Telecom NZ (Spark), implementing Spotify integration. Working with project level waterfall constraints, I implemented a, constrained, behind the scenes Agile project. Requirements document converted into Gherkin user stories. Solution implemented using Spring-batch, Spring MVC and Alfresco. Co-architected software solution and performed initial proof-of-concept implementations with WS02 and Camel. REST and OAuth user synchronisation between two systems, dealing with trans-pacific latency issues.
- **Fullstack Devops** on Stuff.co.nz's front-end and content management platform for Fairfax Digital. Architected and led development of an identity management web service in node.js, validated with Cucumber.js. Involved in aiding migration to an Adobe CMS solution. Implemented tool to aggregate page view stats as part of an ad collector solution. Created EC2 dev sandbox environments of the Stuff platform for Fairfax front-end devs.

Experience: Iteration Master, Pair-programming, TDD, BDD, Cucumber, Java, Spring, JPA/Hibernate, Mockito, Postgres, git, perl, Ruby, IntelliJ, Jenkins, Redmine, Mediawiki, FreeMarker, DevOps, gitlab

Dreamthought Technologies Ltd

London/Cornwall, UK

• *Chief Geek/CTO*

2010 - November 2014

- Analysis and Requirements gathering with iterative estimation process for various small to medium sized software projects.
- Primary software consultancy clients: BBC iPlayer, Headforwards Ltd on projects for a large telco. (*See below.*)

- Delivered talk with Katherine Kirk on agile team empowerment at QCon 2012, London.

Experience: Requirements gathering, client interaction, estimation and costing, Kanban, Agile, iterative delivery, time management, marketing

- **BBC Publishing Services / iPlayer (Primary client for Dreamthought Tech)** London, UK
Java Software Engineering Services on a b2b message orientated middleware project April 2013 - Oct 2013
 - Fast paced project to tight deadlines for Virgin's EPG. I implemented a, domain logic intensive, notification and publication platform for program metadata changes.
 - Reverse engineering and identifying implicit specifications of a legacy Perl stack, iteratively implementing in Java.
 - Implemented MBean's to monitor queue and broker state.
 - Improved test coverage of existing code base.
 - Creation of team-wide Splunk Dashboards and presentation to Publishing Services.

Experience: Kanban, Sonar, Pair-programming, TDD, Java, Apache Camel, Spring, JPA/Hibernate, JMX, MBeans, Zenoss, Active-MQ, JMS, Mockito, MySQL, Apache Velocity, git, IntelliJ, Jenkins, Jira, Confluence, Cucumber, mvn, FreeMaker

- **Headforwards Ltd (Via Dreamthought Tech)** Cornwall, UK
Software Engineer Services (Cloud Virtualisation) Jan 2012 - April 2013
 - Developed interface with VMWare vCloud Director (VCD) for uploading and downloading OVA templates.
 - Led team on implementation and deployment of high-latency, asynchronous, multi-master replication.
 - Implementation of Selenium WebDriver test automation.

Experience: kanban, OO Perl, Plack, Moose, Moo, Postgres, Python, WebDriver, replication, VMWare vCloudDirector, Virtual Center, OVA, OVF, confluence, cloud virtualisation, git, Selenium WebDriver, developer in testing, jquery, css / less, Eclipse, pydev, pysaunter

- **BBC Publishing Services, Dynamite iPlayer, BBC** White City, London, UK
Senior Software Engineer on iPlayer (via Dreamthought Tech Ltd) Oct 2010 - January 2012
 - Led the Performance and Optimisation stream on the BBC iPlayer's broadcasting-reference data service; proactively monitoring and addressing performance issues, whilst facilitating better performance monitoring tool-chains and practices.
 - Working in a Scrum driven team, I worked on various new features and bug fixes on an ETL system and public facing RESTish services.

Experience: Scrum, Kanban, XP, planning poker, pairing, code reviews, TDD, OO, Test Driven Development, MySQL, Emacs, svn, git, Test::*, Web Services, High Performance, Performance and Optimisation, web service design, program metadata, Splunk, Hudson, Java, C, Perl

- **Trinity Mirror Digital Recruitment** London, UK
Senior Software Engineer Jul 2008 - Oct 2010
 - Architected an overridable and configurable email alert system, performing millions of custom job searches nightly. Implemented as a multi-tier chain, with the level of parallelization configurable at each phase of processing (query generation → execution of custom search → data validation → enrichment → data transfer). Tuned through benchmarking and Apache Solr optimisations.
 - Architected and led two other developers in a project to migrate finance functionality from a custom CRM to Salesforce's in-the-cloud platform.
 - Optimized internal, Apache Lucene based, indexer to perform complete cv index (4m+) in hours as opposed to days.

Experience: Java, OO Perl, Solr, Spring, Confluence, Search Strategies, Test Driven Development, MYSQL, MS-SQL, Perl CGI, junit 4.x, Java 1.5, Salesforce, Apex, Ant, Eclipse, Komodo, Team leadership, mentoring, Test::*, HTML::Template, CVS, SVN.

- Morgan Stanley, Securities Reference Data, Enterprise Data Group** Canary Wharf, UK
Aug 2007 - Jul 2009
Software Engineer
 - Refactoring and development of asynchronous Java middleware ETL and publication services; included addition of caching manager, speeding up an internally developed Java middleware product.
 - Refactored/Developed/Knowledge Shared on internal libraries (and tests) for Logging, MQ connectivity, DB connectivity (with Exceptions).
 - Implemented tests for all core classes and presented talk on test driven development.
 - Implemented cross-database deleter tool and provided design feedback for inhouse, ETL architecture.

Experience: OO Perl, Test Driven Development, TSQL, Sybase, Perl CGI, POE, junit 4.x, Java 1.5, Ant, Eclipse, Komodo, Requirements Gathering(course), Test::*, MQ, AbInitio GDE, TSQL Stored Procedures, SQL-Lite, TT2(Template Toolkit), CVS, RCS, TimeManagement/Presentation/Communication Skills(courses followed), calendar spreads, equity and fixed income.

- VisionOSS** Green Park, Berkshire
Nov 2006 - Aug 2007
Software Engineer
 - Polyglot role on Cisco Call Manager and VoIP integrations. Built queueing engine in C. SOAP services. C# QA Wizard test automation. Owned our own deployments. Pg DBA duties.

Experience: C, Perl, C#, XS, PostgreSQL (admin), Gentoo Linux, What we'd now call DevOps, WSDL, SOAP, C#/QA Wizard Test Automation, XML, XSD, (CGI's+Apache::Registry under Apache 1.3), Perl XS, svn(subversion), Eclipse (+ EPIC), SharpDevelop IDE, Portage, Gentoo Linux Admin., VMWare, Windows, VoIP (Cisco CCM).

- Abbey Financial Markets (Santander)** London, UK
Feb 2005 - Nov 2006
Senior Asset Control Developer
 - Designed XML Schema and JMS queue based notification infra for financial instruments. Sybase DBA'ing. Perl, C and Java integration with Asset Control. Solaris Ops. Championed testing and engineering practices in SDLC. Built config driven Swing UI creator. Knowledge sharing on Asset schema.
 - Appointed to intra-department Architectural Governance committee.

Experience: Perl(Inline::C, SOAP, SAX, MQ), Java(Apache Commons Digester, Apache Maven, AC API's, SOAP, JMS & MQ, AWT & Swing, Junit, Xdoclet, EJB), Solaris 8/9, Sybase, Oracle 8/9i, C (AC API), C++, DBX, MQ-Series, Summit, Asset Control (Notifier, All API's), C# (remote service invocation), XML, XSLT, Solaris, AutoSys, CVS, Internal Technical Presentations, Technical Documentation, Bloomberg Server API, Eclipse IDE, Correlation and effective Volatility calculations, ISO-15022 Corporate Actions, Wide range of FX, equity, fixed incomes and various derivative type instruments.

- ING Bank - Global Market Database (GMDB)** Amsterdam, The Netherlands
Feb 2003 - Feb 2005
Experienced Software Engineer
 - Servlet based GUI for FrontOffice to upload FX spot pricing Excel sheets to Asset Control. JNI and Inline::C integration for C libraries to messaging system and timeseries database. Developed c++ http-daemon/soap server for updating price timeseries with inhouse language. Timeseries graphing tool. Corporate Actions DB with semistructured DB.
 - Developed c++ http-daemon/soap server for updating price timeseries in in-house XML.

Experience: SOAP, Sybase, Semi-Structured (Semi-Relational/OO) Database Design, Java, Tomcat, Apache Struts, JNI, JExcel, Apache-POI, Perl 5.6.1/5.8.3, Inline::C, MVC, C, C++, STL, LAPACK, libgd, gsoap, pthreads, MPI, MQ-Series/MQI (C++ and java), XCOM, GNU Auto tools (Automake, Autoconf, etc), Rational Purify, gdb, Apache Ant, Rational Purify, gdb, mod_perl 2, Asset Control, Swing, XML, XSLT, MDDL, Python, Solaris (admin), NT, Domino, Corporate Actions, Bonds/Fixed Income Products, Equities, volatilities, FX (Spots and forwards), Bazian splines, TT2, IR, Delivery of talk to conference of peers.

- Booking.com/Bookings.nl** Amsterdam, The Netherlands
Feb 2002 - Feb 2003
Senior Software Engineer

- I was one of the first 4 devs at booking.com and am their first commit, having introduced CVS. OO Perl based dev and redesign of their legacy hotel booking system. Designed new MC architecture, after evaluating frameworks. Pushed for modular code, OO, mod_perl, dev practices, version control and testing.

Experience: Template Toolkit, HTML::Template, Mason, Gossmer Threads, Design Patterns, mod_perl, PostgreSQL, MySQL, ERD/RDBMS Design, C, Perl XS (C), FreeBSD, Linux.

- **Codix.net Ltd** London, UK
Software Engineer and Systems Administrator *Jan 2001 - Feb 2002*
 - Sys.Admin duties of client(incl. Transport for London, ITN, Lennox Lewis) and in house servers.
 - Various bespoke dynamic web projects with front/backend components involving client interaction.

Experience: Client Interaction, Systems Admin (Linux, Solaris, FreeBSD, OS-X, W2K), Template Toolkit, Mason, C, Java, JBoss, O.O. Perl, LibXML/XSLT, mod_perl, ASPerl, Apache, Exim, CVS, PostgreSQL, MySQL, Oracle-8i.

- **Sportingbet.com PLC** London, UK
Junior Software Engineer *Feb 2000 - Jan 2001*
 - LAMP Stack. i18N internationalisation support, working with foreign language translators. Implemented parley betting subsystem. Developed interfaces for Interactive TV

Experience: Linux, Oracle-8i, MySQL, Interactive TV, CGI, Betting, utf-8, shift-jis, Apache, Perl

3 Relevant Qualifications

- **School of Computer Science, University of Birmingham** B'ham,UK
BSc. Hon. Computer Science and Artificial Intelligence with Study in Continental Europe *1994-1999*
- **Dipartimento di Informatica, Università degli Studi di Pisa** Pisa, Italy
European ECTS Credits *1997-1998*
- **Trained by Shane Hastie, Director of Learning at ICAgile** Wellington, NZ
ICP-ACC ICAgile Certified Professional - Agile Coaching *2016*

4 Other Interests

Community Contributions: Editor on InfoQ.com's Agile and DevOps Streams. Presented on Psychology and the Art of Pair Programming at JS Con NZ 2017 with a psychologist from Plymouth University. Helped organise DevOpsDay NZ 2016 and 2017. Co-presented an Agile war story with Katherine Kirk at QCon London 2013.

Sport and Interests: Running, ukulele, guitar, astronomy, languages, star trek and fatherhood. Received a distinction on completion of Martin Odersky's Coursera Module, entitled Functional Programming with Scala. Run a Code Club for kids.

Recent Conferences: Numerous tech-talks, **InfoQ reporter at QCon London(2018)**, CodeMania 2018, **Speaker at JSCon NZ(2017)**, KiwiCon X (2016, Wellington), **Volunteer at DevOps Days Wellington(2016)**, ScaleConf (2016, Wellington), CodeMesh (2015, London), Agile NZ(2015), WDCNZ (2015, Wellington), Agile Alliance Open Day in Wellington(2015), **Speaker at QCon London(2013)**, Agile on the Beach (2012), YAPC::EU in Pisa (2010) and many others over the years.

5 Referees

Katherine Kirk

katherinekirk[AT]hotmail.com

Agile Coach and International Speaker

<https://www.infoq.com/author/Katherine-Kirk>

Marcus Hickman

marcus.hickman[AT]ometria.com

Product Manager

<https://www.linkedin.com/in/marcushickman1/>