



Raf Gemmail

Lean Engineering and Architectural Leader

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📍 Kapiti Coast, Wellington, NZ

🇬🇧 British Citizen/New Zealand Permanent Resident

in www.linkedin.com/in/rafiqgemmail

github github.com/fiq

🐦 www.twitter.com/fiqus/

🌐 www.infoq.com/author/RafiqGemmail

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/DDDD/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.

Work Experience

Senior Technical Consultant (DevOps)

February 2020 - Present

Assurity Consulting

📍 Wellington, NZ

Joined Assurity shortly before lock-down and immediately started to share my experience in remote teaching and facilitation. Developed patterns for remote teaching and created a Remote Foundations of DevOps course inline with the ICAgile syllabus. Provided remote Java coaching for a team of test engineering consultants tasked with automating a Salesforce integration. Took an idea from fruition and organised a remote conference with international speakers on remote working challenges; raising funds for New Zealand foodbank (<https://assurity.nz/insights/bringing-the-future-forward-with-assurity-and-the-foodbank-project/>). On site with NZQA helping a team begin its journey in using Concordion for BDD/SBE in business aligned API design. Contributed to pre-sales activities through delivering DevOps lunch and learn talks for an embedded software producer. Produced a brochure with customer targetted product offerings. Delivered a remote Containerisation Workshop with Allen Greer for Dunedin Techweek's Agile Stream on behalf of the Agile Alliance NZ.

Facilitation and Coaching

DevOp

Education Creation and Delivery

Remote pairing and coaching

Concordion

BDD/ATDD

Conference Planning

Agile and DevOps Coach

November 2019 - February 2020

NZTA

📍 Wellington, NZ

Contracted to help New Zealand's Transport Agency on its path to adopting Agile and DevOps; also doubling up as a Scrum Master. Worked across two teams adopting Agile practices and helped provide context around a struggling vendor engagement. Partnered in a team reset. Helped teams define a testing strategy, spike through uncertainty, collaborate with external partners and work through an Azure DevOps migration. Also supported program and project leads in lean principles, facilitating road-mapping and producing an example framework based on lean ux, kanban, DevOps and team topology principles. Interviewed to build an internal team. Mentored a scrum master and a junior.

Road-mapping

Azure DevOp

Coaching

Remote pairing with vendor

Facilitation

GIS

Situational leadership

Terraform

Remote Computer Science Professor

March 2019 - current (_on going partnership_)

OpenClassrooms

📍 Fully remote, NZ & Paris, Fr

Contracted as a professor by title, I have developed my teaching aptitude through creating undergraduate classes for a French accredited online university. In partnership with Learning Specialists and Beta-Testers I have built online courses and defined assessment criteria for **Java Testing, Java Debugging**, Java Concurrency and Building RestAPI's with Spring Data. I also provided contracted consultations to other professors on Spring related courses. I have partnered with OpenClassrooms on their syllabus for a Master's Program in Architecture and produced industry-based projects using real code and other artefacts to simulate reality.

fully remote working

teaching

consultancy

media training

presentation of technical material

script production

course and syllabus design

applying learning loops to teaching

self study of training from the back of the room

TOGAF ADM

architecture

Springboot

Spring data

Spring security

Testing pyramid

Swagger/OpenAPIv3

cloud formation

Agile and Technical Consultant

July 2018 - January 2019

MPorium

London, UK

I **contracted** at MPorium as a hands-on Technical and Agile Coach after being forced back to the UK due to a family crisis. During my time there, I supported a small development team experiencing the growing pains of a scaling start-up in the data intelligence domain. Leading by example, I spent half my time developing and delivering ad optimisation stories on an AWS/Spark/Storm/Springboot/Angular/OIDC stack.

In my capacity as a coach, I ran test strategy workshops, business/technical risk elicitation sessions, domain modelling events, Scala/Spark/Storm mob programming tutorials and Clean Code brown-bag lunches. Attempting to create a fail-to safe culture of continuous improvement, I also ran 5-whys sessions.

I supported Product Owners and developers in working with the broader organisation to start using hypothesis driven development and specification by example. I also developed Agile Fundamentals training for the teams, to address confusion over Agile ceremonies which were technically biased.

MPorium's new CTO partnered with me on rebooting the teams and defining team level working agreements and backlogs before a new Sprint Zero.

coaching remote teams AWS ECS Lambda Java Springboot Spring-data Swagger/OpenAPIv2 Auth0 OIDC/JWT Spark Containerised Gatling Tests Scala Hypothesis-driven development team-rebooting coaching mentoring facilitation working with uncertainty Scheduled Lambdas Gatling Docker-compose couchbase

Technical Design Lead
Bank of New Zealand

January 2018 - June 2018
Wellington, NZ

Actively led and coached teams across BNZ's partner commercial online banking platform. During my time at BNZ I placed my focus on several teams which were cutting new ground by building public API's outside of its long-standing monolith. Using techniques such as DDD and domain modelling, pair programming, continuous delivery and containerisation I supported several teams in launching microservices containerised on OpenShift.

As part of a broader architecture team I also helped provide governance and review of proposed OpenAPI specifications and strategic technical pivots. I also conducted retrospectives for mobile teams which were struggling with legacy architectural decisions. I supported adoption of security championship and participated in security training.

coaching product teams architecture recruitment Kafka OpenShift Swagger/OpenAPI Java Spring React Scala Technical Radar Hypothesis-driven development Mule DDD Oracle

Technical Coach and Lead
Stuff.co.nz, Fairfax Media

May 2015 - January 2018
Wellington, NZ

This role at New Zealand's most popular domestic website balanced departmental leadership, Domain Ownership, Agile technical coaching across multiple teams, Lean architecture, hands on development and mentoring. I served my teams in delivering Content Navigation features using AI and NLP, editorial video capabilities and a new reactive frontend. My teams were the first to achieve continuous delivery using TDD, BDD, Mob Programming, DDD and Trunk Based Development. I coached a culture of ownership with a "build it, ship it, own it"-mentality.

As part of the leadership team I helped create an empowered culture with team self-selection and alignment with business goals. I encouraged a safe-to-fail culture of experimentation, using hypothesis driven development and captured architectural and organisational experiments using a Technology radar.

I joined Stuff.co.nz as the only Technical Lead across a large team of 20+ developers working to monthly release cycles on a debt-heavy monolith. Together we strangled this monolith. On my departure multiple specialised teams were releasing daily within bounded domains, using single responsibility Microservices and successfully using modern techniques such as mob-programming. I shared insights into our journey in a talk given at the Javascript New Zealand conference in 2017.

coaching remote teams Springboot OSGI vertx node.js Java Scala Gatling JCR PostgreSQL Elastic Search ELK Jenkins AWS EC2 ECS/ECR SQS/SNS S3 Express JPA Spring-Data OpenAPI/Swagger OIDC/OAuth2 Mocha cucumber.js cucumber-jvm Web Driver Testing Pyramid Strangler Pattern Continuous Delivery Feature Flags A/B/Multivariate Testing React Redux GraphQL Canned Technical Coaching Mentoring Puppet Vagrant Docker-Compose Codeship Raygun Loggly Mailchimp Prometheus Splunk Consumer Contract Testing Architecture Sys. Admin & DBA jHipster Angular cloud formation

Senior Software Engineer, Solutions Architect & Iteration Master
Catalyst IT

October 2013 - May 2014
Wellington, NZ

I moved to New Zealand to work with Catalyst as a Solutions Architect and eventually took on the role of Scrum Master and Agile Lead on one of the country's largest projects for Government. I worked with the Cabinet Secretary, as my product owner, with whom I served a team of 30+ BA's, testers and developers, in modernising New Zealand's policy making process. Through leading by example on agile development practices, such as BDD/TDD/pair programming, I developed and architected the integration of New Zealand's largest telecommunications provider with Spotify's partner API using microservice and DevOps patterns to continuously deliver features. I also worked for Stuff, New Zealand's largest site, and performed DevOps and Development duties on their high-performance site. This included using node.js to migrate data between two very large CMS's.

Java node.js Ruby Perl PHP Spring Spring-integration Spring-batch Spring-data Rest WS02 Feature Flags Microservices Jenkins Alfresco Saml Puppet Vagrant Packer Mocha Jira Mockito DevOps TDD BDD pairing facilitation mentoring in agile practices running retrospectives running requirements workshops creating a culture of continuous improvement JIRA Sequelize Mocha Cucumber Architecture RabbitMQ ELK

Senior Software Engineer
BBC iPlayer

April 2013 - October 2013
London, UK

Short **contract** to build business-critical Java microservices in a timely manner. Reverse engineered and migrated a legacy set of Perl microservices to Spring and asynchronous Camel pipelines using intermediary queues. Optimised and automated release process to support near-continuous delivery. Defined business acceptance criteria using BDD workshops.

part-remote Java Perl Ruby Python Spring Apache Camel JMS Cucumber Mocha Jira Mockito
Jenkins BDD DDD TDD MQ Pair programming S3 SQS/SNS MySQL AWS EC2 DevOps
Third party integration

Senior Software Engineer

January 2012 - April 2013

Headforwards

♦ Cornwall, UK

Contract where I designed and delivered subsystems for NTT's enterprise cloud solution. Co-architected and led initiatives to integrate single sign-on, automation testing and large OVA upload and bootstrapping. Stood in for Architects on request.

OO Perl Java JavaScript Python VMWare VCD / VC Rest Microservices JQuery SASS CORS
HMTL / CSS / JS MVC Pysaunter / WebDriver PSGI / Plack PostgreSQL Cassandra DB Mocha Jira Mockito
Jenkins TDD Kanban Pair programming Multi-part uploads Multimaster replication Fault tolerance Automation Testing
DevOps

Senior Software Engineer

October 2010 - January 2012

BBC iPlayer

♦ London, UK

On **contract** at the BBC, I led performance optimisations of one of the UK's most performant services, supporting iPlayer. Visualised platform metrics and built versioned Rest API's for serving high-performance data. Paired on talk with Katherine Kirk at QCon 2012 on this team's agile journey.

Java C Perl MySQL memcached Database migrations Linux Solaris Rest TDD Pair Programming XP
DDD Ops Mocha Jira Mockito Hudson / Jenkins Splunk Database migrations Kanban WSDL jmeter
profiling Event driven architecture Virtualisation Automation Testing DevOps JPA

Senior Software Engineer

July 2009 - October 2010

Trinity Mirror Digital Recruitment

♦ London, UK

Helped architect and scale a major job board. Performance optimisation of search and began migration to Spring.

Java OO Perl / TT2 Solr Lucene PostgreSQL Linux production support Database migrations Lucene optimisation MVC
Salesforce Apex Hudson Mocha Jira Importing external models TDD Pairing Automation Testing

Software Engineer

August 2007 - July 2009

Morgan Stanley

♦ London, UK

Designed and built high-performance ETL services to consume and publish market reference and timeseries data. Designed and implemented reactive credit spread software.

Multi-threaded Java OO Perl JEE MQ Abinitio Sybase TDD JMS Production Support & Delivery
Exernal API Integration & Testing Automation Testing Internal Talks

Software Engineer

November 2006 - August 2007

VisionOSS

♦ Green Park, Berkshire, UK

Short contract integrating a CMDB with CISCO VoIP hardware. Included automation testing using C#. Extended queing system using C.

Perl C CISCO Call Manager C# Test Automation XML/XSLT/XSD PostgreSQL Linux Sys. Admin Automation Testing

Senior Asset Control Developer

February 2005 - November 2006

Abbey Financial Markets (Santander)

♦ London, UK

Implemented performant data-intensive applications and middleware for traders and internal systems. Created domain language in XML. Appointed to intra-department Architectural Governance committee.

Perl / inline-C C++ / STL C# WSDL WebSphere MQ J2EE Swing DDD Sybase JMS Architecture
Sys. Admin & DBA Middleware Timeseries Databases WebShere MQ Automation Testing

Experienced Software Engineer

February 2003 - February 2005

ING Bank

♦ Amsterdam, NL

Implemented performant data-intensive applications and middleware for front office traders and internal consumers.

LAMP Perl / inline-C C++ / gSoap Solaris Sybase Oracle J2EE MQ JMS Sys. Admin HTML/CSS
Timeseries Databases Servlets Automation Testing

Senior Software Engineer

February 2002 - February 2003

Booking.com

♦ Amsterdam, NL

Developer number 4 and the first commit. Refactored original code to be more OO and normalised Database.

ModPerl inline-C Linux FreeBSD MVC Database design MySQL PostgreSQL HTML/CSS Automation Testing

Software Engineer and Systems Administrator

January 2001 - February 2002

Codix.net

♦ London, UK

Worked as both a SysAdmin and Software Engineer, building and maintaining brand-name sites on bespoke projects.

Perl C Java Linux FreeBSD Solaris MySQL PostgreSQL HTML/CSS Automation Testing

Junior Software Engineer

February 2000 - January 2001

Sportingbet.com

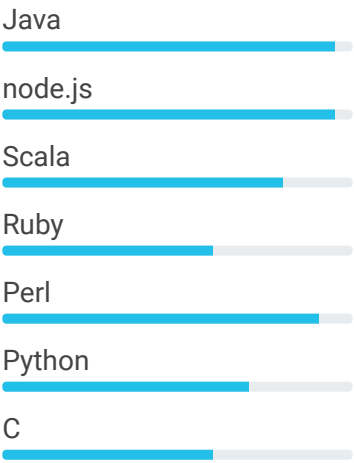
♦ London, UK

Cutting my teeth in the commercial world building statistical interactive TV and web applications.

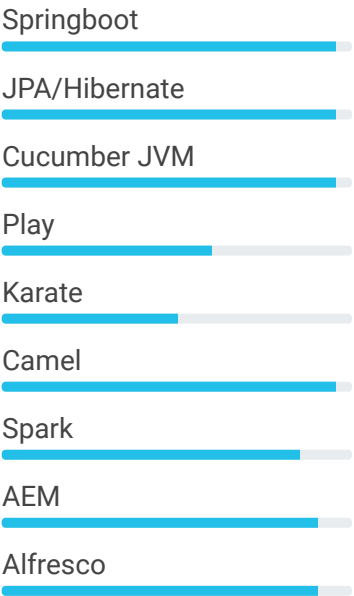
LAMP Perl HTML/CSS Automation Testing

Professional Skills & Tools

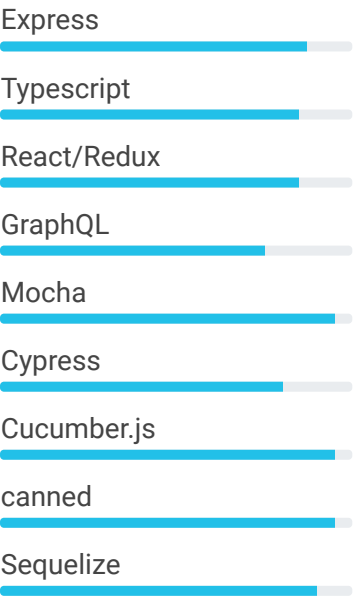
Languages



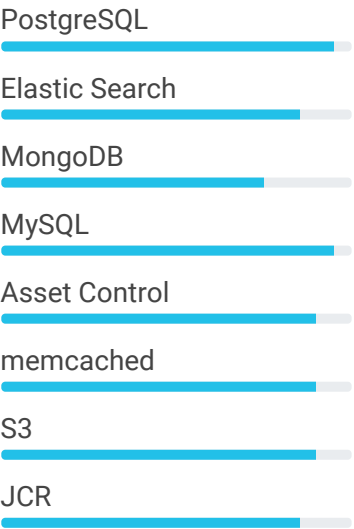
JVM Frameworks



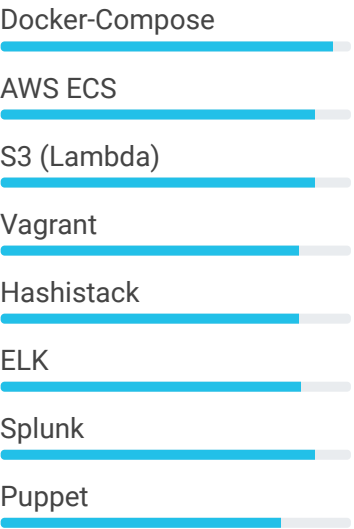
JS Frameworks



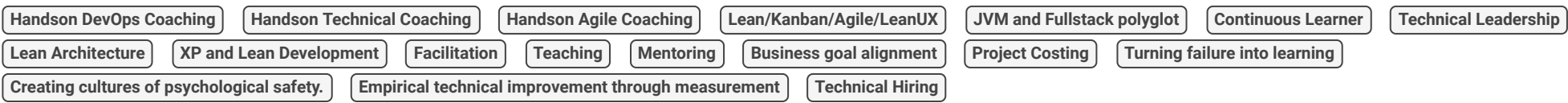
Datastores



Platforms



Holistic Leadership Skills



Relevant Education

BSc Hon. Computer Science and Artificial Intelligence
University of Birmingham
1994 - 1999

Study in Continental Europe, ECTS Credits
Dipartimento di Informatica, Universita degli Studi di Pisa
1997 - 1998

ICP-ACC ICAgile Certified Professional - Agile Coaching
Trained by Shane Hastie, Director of Learning at ICAgile
2016

Interests

I am a homeschooling dad who is fascinated by the sciences as well as futurism🙌. I practice amateur astronomy in the night and love to go on coastal jogs during the day. My other life-long passion is music: I love listening to it as well as playing both the guitar🎸 and ukulele.

I enjoy writing engineering culture articles for InfoQ and regularly attending and contributing to conferences and meetups. Most notably, I gave a **talk** on different patterns of pair and mob programming at JSConNZ and a well-received **talk** *starting at 30'* on combating technical debt at QCon London. In recent years I've helped co-organise DevOpsDaysNZ which has brought me immense personal satisfaction.