



# Raf Gemmail

Lean Engineering and Architectural Leader

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## 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

cloud formation

### Agile and Technical Consultant

July 2018 - January 2019

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 delivering ad optimisation stories on an AWS/Spark/Storm/Springboot 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
- 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
- Codship
- 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
- WSO2
- 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 queuing 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**

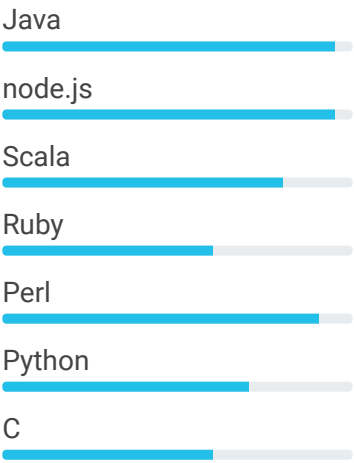
♦ London, UK

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

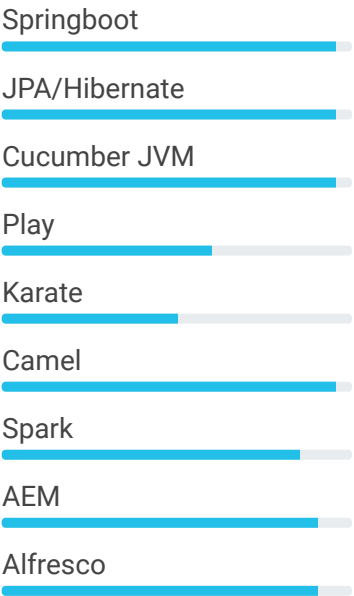
LAMP Perl HTML/CSS Automation Testing

# Professional Skills & Tools

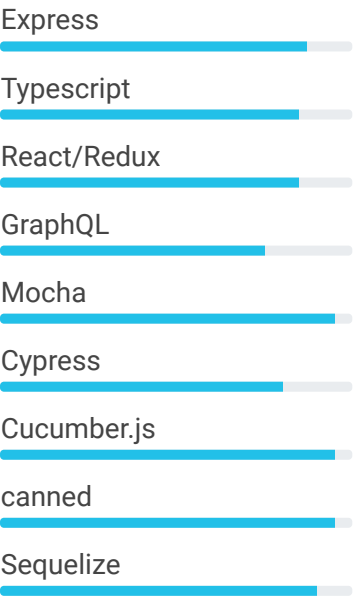
## Languages



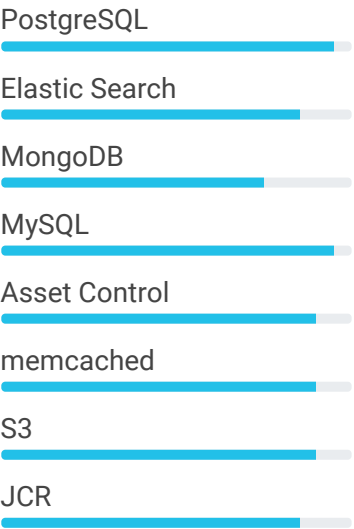
## JVM Frameworks



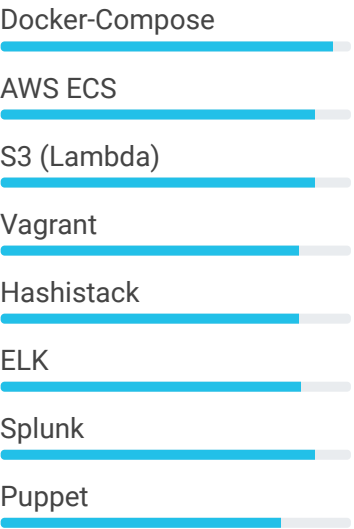
## JS Frameworks



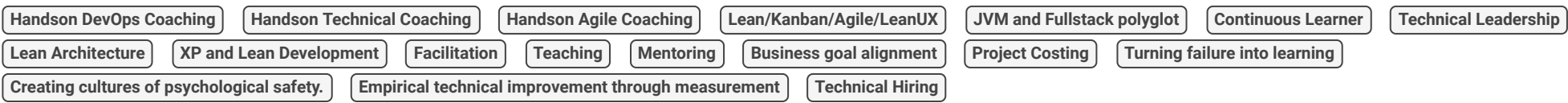
## Datastores



## 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.