# Raf Gemmail

*Lean Engineering and Architectural Leader*

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🐦 www.twitter.com/fiqus/

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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/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 crafsmanship 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)
**Assurity Consulting**

February 2020 - *Present*
📍 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 prodcuer. 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
**NZTA**

November 2019 - February 2020
📍 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
**OpenClassrooms**

March 2019 - current (_on going partnership_)
📍 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

### MPorium

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 Fundementals 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
January 2018 - June 2018
### Bank of New Zealand

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
May 2015 - January 2018
### Stuff.co.nz, Fairfax Media

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 developments 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
October 2013 - May 2014
### Catalyst IT

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
April 2013 - October 2013
### BBC iPlayer

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
**Headforwards**

January 2012 - April 2013

◉ 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
**BBC iPlayer**

October 2010 - January 2012

◉ 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
**Trinity Mirror Digital Recruitment**

July 2009 - October 2010

◉ 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
**Morgan Stanley**

August 2007 - July 2009

◉ 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 · Expernal API Integration & Testing · Automation Testing · Internal Talks

## Software Engineer
**VisionOSS**

November 2006 - August 2007

◉ 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
**Abbey Financial Markets (Santander)**

February 2005 - November 2006

◉ 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
**ING Bank**

February 2003 - February 2005

◉ Amsterdam, NL

Implemented perfomant 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
**Booking.com**

February 2002 - February 2003

◉ 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
**Codix.net**

January 2001 - February 2002

◉ 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
**Sportingbet.com**
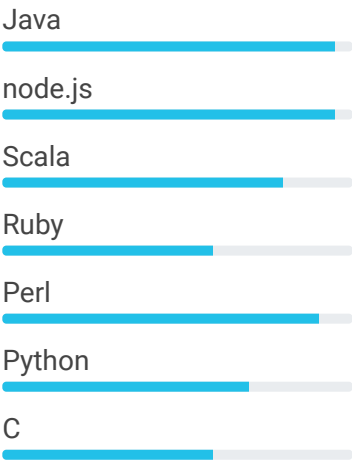
February 2000 - January 2001

◉ London, UK

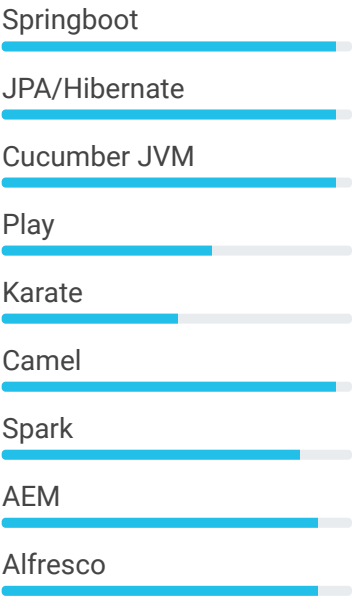Cutting my teeth in the commercial world building statistical interactive TV and web applications.

LAMP · Perl · HTML/CSS · Automation Testing
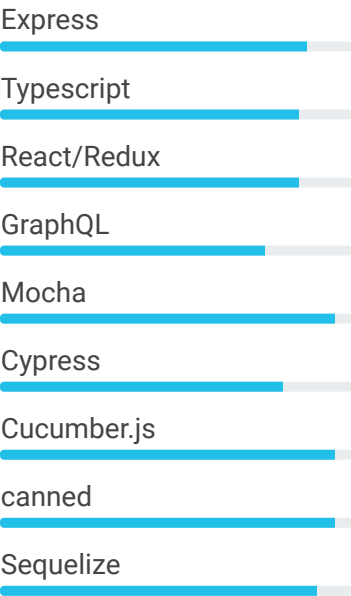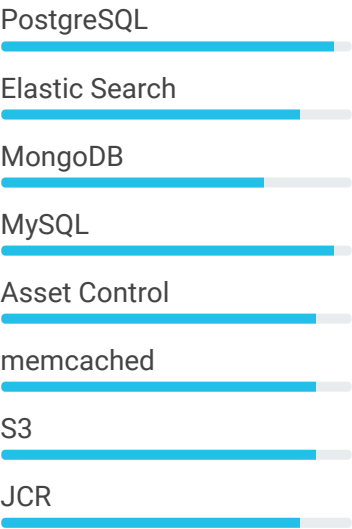
# Professional Skills & Tools

### Languages
Java
node.js
Scala
Ruby
Perl
Python
C

### JVM Frameworks
Springboot
JPA/Hibernate
Cucumber JVM
Play
Karate
Camel
Spark
AEM
Alfresco

### JS Frameworks
Express
Typescript
React/Redux
GraphQL
Mocha
Cypress
Cucumber.js
canned
Sequelize

### Datastores
PostgreSQL
Elastic Search
MongoDB
MySQL
Asset Control
memcached
S3
JCR

### Platforms
Docker-Compose
AWS ECS
S3 (Lambda)
Vagrant
Hashistack
ELK
Splunk
Puppet
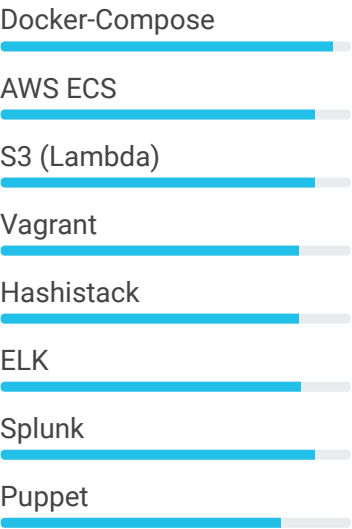
## Holistic Leadership Skills

`Handson DevOps Coaching` `Handson Technical Coaching` `Handson Agile Coaching` `Lean/Kanban/Agile/LeanUX` `JVM and Fullstack polyglot` `Continuous Learner` `Technical Leadership` `Lean Architecture` `XP and Lean Development` `Facilitation` `Teaching` `Mentoring` `Business goal alignment` `Project Costing` `Turning failure into learning` `Creating cultures of psychological safety.` `Empirical technical improvement through measurement` `Technical Hiring`

# 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.