Raf Gemmail

Leader and Educator in Lean, Engineering and Architecture

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🪪 **British and New Zealand Citizenship**

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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 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**, Home Schooling Dad, **DevOpsDaysNZ** organising team, speaker at meetups and conferences.

Work Experience

Head of Product / Head of Technology (Fully Remote)
Developers Institute

November 2020 - *present*
📍 Fully Remote

I joined Developers Institute as Head of Product to help shape a startup in a fully remote context. As line manager to a team of six, I helped instill Lean practices and backlog visibility using Jira. Collaborated with partners across the business to deliver a modern technical curriculum. Invited authors and reputable speakers to expose students to highly experienced leaders in the field. I designed and delivered a Kanban, LeanUX and AWS centric Agile and DevOps curriculumn. Delivered and reshaped a Server Side node.js course. Helped the company move to reusable patterns for course delivery.

Through a secondment with a sister company, I also provided professional consulting to a large national utility company. Successfully helped engage a large client contract through early phase discovery work. Ran org-wide session to help align varied interpretations of remote-working. Guided use of terraform for provisioning.

Delivered a talk at nz.js 2021 conference on the value of a teaching competency and growing junior developers. The talk was targeted at Technical Leads, Senior Engineers and Coaches: Turning Around Lives Through Teaching.

Architecting a modern data architecture with ML capabilities.

`Remote leadership, paring and coaching` `Facilitation and Coaching` `DevOps` `Education Creation and Delivery` `AWS` `Agile Leadership` `Line Management`

Senior Technical Consultant (DevOps)
Assurity Consulting

February 2020 - November 2020 (COVID)
📍 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. 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 provider. Produced a brochure with customer targeted product offerings. Delivered a remote Containerisation Workshop with Allen Greer for Dunedin Techweek's Agile Stream on behalf of the Agile Alliance NZ. Championed Team Topologies inviting the author to speak to an audience. Delivered a Team Topologies overview to NZQA leadership team.

`Facilitation and Coaching` `DevOps` `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 · Swagger/OpenAPIv3 · cloud formation

Agile and Technical Consultant
MPorium

July 2018 - January 2019
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 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 · 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` `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
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.

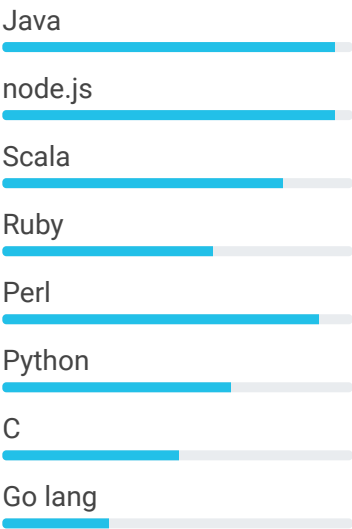Perl C Java Linux FreeBSD Solaris MySQL PostgreSQL HTML/CSS Automation Testing

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.

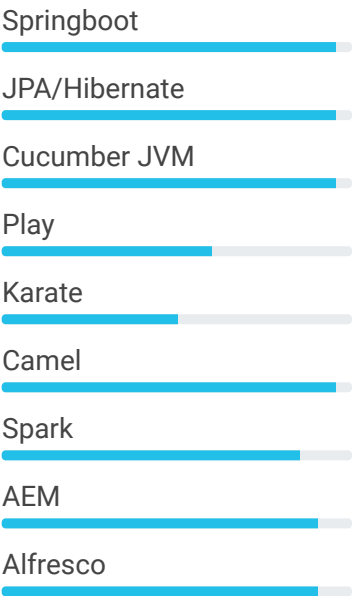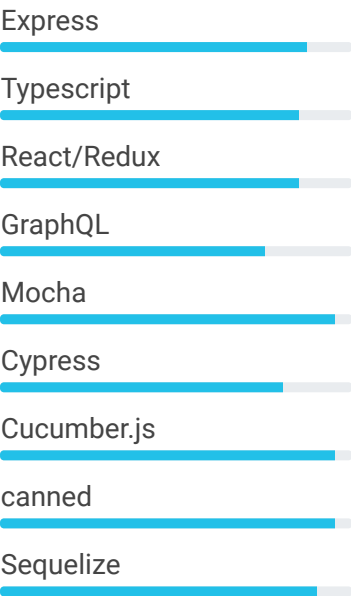LAMP Perl HTML/CSS Automation Testing

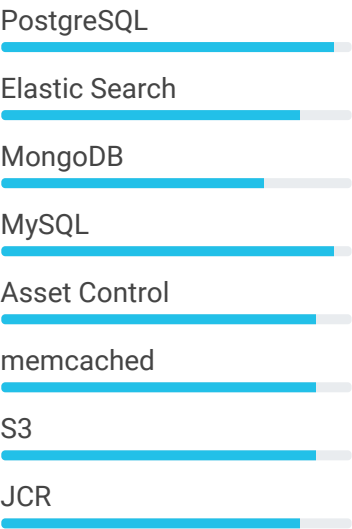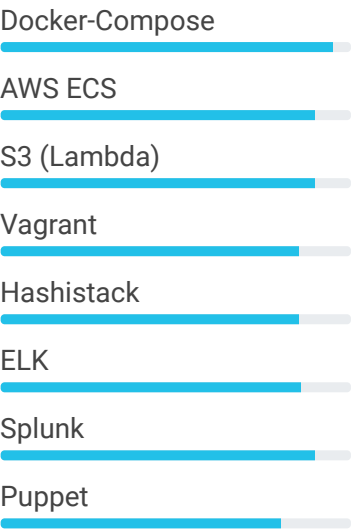# Professional Skills & Tools

Languages	JVM Frameworks	JS Frameworks	Datastores	Platforms
Java	Springboot	Express	PostgreSQL	Docker-Compose
node.js	JPA/Hibernate	Typescript	Elastic Search	AWS ECS
Scala	Cucumber JVM	React/Redux	MongoDB	S3 (Lambda)
Ruby	Play	GraphQL	MySQL	Vagrant
Perl	Karate	Mocha	Asset Control	Hashistack
Python	Camel	Cypress	memcached	ELK
C	Spark	Cucumber.js	S3	Splunk
Go lang	AEM	canned	JCR	Puppet
	Alfresco	Sequelize		

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.