

# Bill Hedworth

Bristol

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## Profile

Career JVM developer with 10 years of commercial Clojure experience. Team player but just as happy being a self-reliant pragmatist, I have with a track record of delivering modern software solutions on a large commercial scale. Have a keen passion for tech and enjoying keeping abreast of modern architecture, frameworks and ways of working. I have a lot of experience working on large microservice based event streaming and restful platforms across various cloud providers and I'm looking for an agile environment where I can put this experience to use.

## Qualifications

### University of Wales

2:1 BSc (HONS) COMPUTER SCIENCE

Aberystwyth

September 2000 - June 2004

### Coleg Ceredigion

BTEC NATIONAL DIPLOMA IN IT APPLICATIONS

Aberystwyth

September 1999 - June 2000

### Penglais Comprehensive

2 A-LEVELS, 10 GCSE's (A-C)

Aberystwyth

September 1992 - June 1999

## Employment

### OVO Energy

SENIOR SOFTWARE ENGINEER

Bristol

2016 - Present

I currently work for OVO group within their Kaluza business building a new real-time intelligent energy platform for utilities to manage a modern renewable energy grid. I've worked on it since its inception and have been central in designing and implementing some of its core event streaming microservices on top of Apache Kafka.

- Most recently I've been working on a group of clojure services for parsing industry data (flows) to act as a bridge for translating millions of energy industry transactions files onto Kafka and vice-versa back to the industry.
- Core developer on Kaluza's real-time charging pipeline, a collection of Clojure microservices backed by kafka that spans taking customer meter readings through to billing customers based on contract length and tariff. This has been my main focus for my time at Ovo and many of my own ideas and design decisions have been incorporated into the design
- Implemented a 3rd party payment integration for an online credit card payment system, written in Scala using ScalaZ and http4s

### LINE Corporation - MixRadio

SENIOR SOFTWARE ENGINEER

Bristol

2014 - 2016

With MixRadio being sold to LINE corporation by Microsoft my role was a continuation from that at Microsoft.

- I developed a full stack Clojure and ClojureScript service which enabled in house mixmasters to manually tweak MixRadio's recommendations engine.
- I Integrated Salesforce with MixRadio's internal CRM system. A Clojure service which extracted all relevant data from Salesforce and parsed it to AWS SQS and persisted it to Redshift.
- I produced an EMR processing pipeline to transform our massive user taste profiles into a suitable format and export it to Salesforce for recommendation emails.
- I wrote various Cascalog and Pigpen Big data flows over millions of user events to support and improve music recommendations eg find and boost emerging "hot" tracks.

### Microsoft - MixRadio

SENIOR SOFTWARE ENGINEER

Bristol

2013 - 2014

Microsoft purchased Nokia's mobile business. My work was focused even more on the core music recommendations of the business building fault-tolerant, performant Clojure services and data processing at scale.

- Played a key role in creating a complex music recommendation service for similarly liked tracks and artists. This replaced the 3rd party reliance on The EchoNest. Built with Clojure on DynamoDB.
- I built a highly performant microservice to match track and artist metadata to MixRadios internal representation.
- I created a service to warehouse client user events from Kafka to S3, encrypting any sensitive user data.
- I designed and produced a service to produce new album release events no notify interested users, in Clojure on MongoDB.
- I built up the majority of MixRadios client 'views' API, it produced customised views of JSON data allowing clients to build their pages, coded in Java and Spring.
- A key contributor to MixRadios core services:
  - Users music taste profile service, based on MongoDB in Clojure.
  - An API to serve session based curated mixes, in Clojure and Redis.
  - The music catalogue and search engine, based on Java, MySQL and Apache Solr.

## Nokia

### SENIOR SOFTWARE ENGINEER

Bristol

2009 - 2013

During my time at Nokia I transitioned from a Java and linux build engineer, to a Clojure engineer. My role from newest to oldest:

- *Developer:* Designed and built key services to provide mobile phone notifications to millions of users.
- *Developer:* In 2011, I joined a small team working on Nokia's first production Clojure services with the ultimate aim to replace our 3rd party integration with The EchoNest.
- *Developer:* Nokia ceased to support Meego and I moved into full-time Java development. I was one-half of a pair that integrated with a 3rd party company, The EchoNest. Integrating their music recommendations produced Nokia music's first iteration of its internet radio (later to be called MixRadio). This was a Java and Spring based service.
- *Build Manager:* I became the Bristol office's package manager for Nokia's Meego (Linux-based) operating system. I was responsible for automating the build process and integrating Bristol's music software into the wider companies operating system via apt package management.

## Alterian

### SENIOR AUTOMATION ENGINEER

Bristol

2008 - 2009

A UK-based supplier of marketing automation software and services. I was their sole automated tester and worked on their "Next Generation" web-based platform.

## Experian (Decision Analytics EMEA)

### SENIOR AUTOMATION ENGINEER

Bristol

2006 - 2008

Talgentra was acquired by Experian, I progressed into a senior automated testing role.

## Talgentra

### JUNIOR SOFTWARE ENGINEER

Bristol

2004 - 2006

Talgentra produced utility billing software for electricity, water, gas and telecommunications. This was my initial introduction to Java, writing some Junit and automated acceptance tests.

## Skills

<b>Programming</b>	Clojure, Scala, Java, ClojureScript
<b>Clojure</b>	Clojure Spec, Reitit, Ring, Integrant, Aero, HugSQL, Jackdaw
<b>Database</b>	Postgres + JSONB, DynamoDB, MySQL, Redis, MongoDB, Redshift, BigQuery
<b>Streaming Frameworks</b>	Kafka, Kafka Streams, Flink
<b>Metrics, logging, Alerting</b>	Datadog, Grafana, Prometheus, Kibana
<b>Cloud</b>	AWS, GCP, Terraform, Kubernetes, Docker

## Interests

Keen tech enthusiast, always tinkering with PC's. Passionate about music and a bit of an audiophile. Enjoy sports, go running most days also a keen cyclist that can be pretty geeky about my bicycles.