

# CV - Russell Dunphy

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An experienced **software developer**, **technical leader**, and **manager**, with a love of **functional programming** and **coding as language**, who came to programming by a somewhat unusual route: a first class degree in Creative Writing.

I see a tech team as an **ecosystem** made up of people, code, processes, and tools. Tending to that ecosystem, understanding it, and finding ways to optimise it is one half of the work I find most interesting and rewarding. The other half: developing long-term technical **strategy** that takes into account both this ecosystem and the wider business context, and finding sustainable, incremental ways to implement it.

I've managed teams ranging in size from two to twelve, including developers, data scientists, scrum masters and testers. I've worked with a number of languages, most recently **Clojure** and **Clojurescript**, and love learning more. I'm happy wrangling infrastructure, doing backend work, or building frontend features. Most of all I like finding ways to make these different levels of the stack, and the people who work on them, form a cohesive whole.

## Employment

### **Head of Engineering - HealthUnlocked** *Jun 2016 - Present*

HealthUnlocked is social network for health, with around 3-4 million unique sessions per month. Originally hired as a Senior Clojure Developer, I was promoted to Head of Engineering after three months. Responsibilities of the role include: managing the tech team; recruitment; setting technical strategy for the organisation; and working with the other developers to implement it.

Key achievements:

- Overhauled our development process to **increase release frequency** from once or twice a week to around five times a day (in a team of seven)
- Introduced **infrastructure as code** and **immutable infrastructure** by migrating our production AWS infrastructure to new, **Terraform**-managed accounts - and in the process, created a segregated staging environment for safer testing
- Built up our real-time **monitoring** and alerting infrastructure that allowed us to understand, for the first time, the health of our system
- Created a **data warehouse** and ETL pipeline using Redshift, AWS DMS, and Metabase - and ran SQL workshops for people across the company

- Architected a new suite of applications designed to pay down **technical debt** in an incremental, manageable way, in the process reducing the overall error rate by more than a factor of 10; 99th percentile response times from around 1.7 to around 0.45 seconds; and average response time from around 130 to around 80 milliseconds.
- **Built a team** of developers new to Clojure, AWS, and DevOps, and watched them grow into experts
- Gave **conference talks**, and encouraged others in the team to give talks, that raised the profile of HealthUnlocked within the Clojure community - at the 2018 Clojure eXchange conference around 50% of attendees had already heard of HealthUnlocked

#### **Tech lead - Funding Circle** *Nov 2015 - April 2016*

Identified and highlighted some of the gaps with regards to **non-functional requirements** in the software being built, and led a team to address them. Ran the "Clojure Guild" - a weekly workshop to help the large team of Ruby developers transition to **Clojure**.

#### **Senior Developer - BUGS Bioscience** *Nov 2014 - Nov 2015*

Brought in to help transition an academic group into a commercial, non-profit entity. Worked to bring the existing team on board with new ideas such as **service-oriented architecture**, **pair-programming**, and **code reviews**, and to transition from Perl to **Clojure**. Designed and built a system for serotyping Streptococcus Pneumoniae, including: a rich **Clojurescript** front-end using **Reagent**, **React**, and **Re-frame**; deployment infrastructure using **Docker**, **Ansible** and **Cloudformation**; and monitoring capability using **Riemann**. Project-managed the development team, leading **stand-ups** and weekly meetings.

#### **Senior Developer - uSwitch** *Feb 2014 - Nov 2014*

Built a system for collecting and querying analytics data using **Clojure**, **Kafka**, and **Redshift**. Began work to migrate a legacy monolith PHP application to a more service-based architecture, with a Rails frontend. Configured deployment of **AWS** infrastructure using **Puppet**.

#### **Senior Developer - NHS Choices** *Jul 2013 - Feb 2014*

**Mentored** multiple teams of .NET developers as they cross-trained into Ruby/Rails. Worked to isolate and replace parts of the existing .NET and Sharepoint systems with a more flexible **service-oriented architecture**. Held informal talks/sessions covering **Ruby**, **Erlang**, and other interesting languages and technologies.

## **Ruby Developer - onthebeach.co.uk Jul 2012 - Jul 2013**

Worked on a variety of **Ruby** applications including the main site and the search and aggregation engine. Flew the flag for **immutability** and the **functional style** within the company, and gave talks on the subject to the rest of the dev team. Led a small team in rebuilding the core “basket” functionality of the site.

## **Software Developer - Integrated Care Planning Ltd 2011 - 2012**

Developed a Rails application with a MongoDB datastore that wrapped up a third-party System Dynamics simulation engine. The application was designed to help users make predictions about the long-term effects of particular interventions on a long-term condition pathway. Began work on a bespoke simulation engine, initially in **Scala**, then **Clojure**.

## **Software Developer - Ocado 2010 - 2011**

Worked within the Data Warehouse team, acting as liaison with the Marketing department. Used **PL/SQL** stored procedures to aggregate data from disparate sources. Developed Java/Spring apps that integrated with external email and SMS providers. Wrote a new, modular, OSGi based system for scheduling and monitoring the team's many batch jobs.

## **Software Developer - TPP 2008 - 2010**

Involved in all stages of the development lifecycle of a large, operationally critical healthcare system, written in **Java**.

## **Education**

- **BA Creative Writing (Honours class I)** - University of Leeds (2006)
- **AAAB A-levels including A in Maths + A in AS Further Maths**
- **10 GCSEs (A\*s in Maths, English and Science)**

## **Interests**

Outside of programming I enjoy getting the most out of the weird and wonderful things living in London makes available. I like doing the occasional terrible cat or dog painting. Even more occasionally (and more terribly) I like making the odd song about dogs, too.

I also volunteer as a tech coordinator and trustee of Walthamstow Migrants' Action Group, which runs a support centre for both documented and undocumented migrants and asylum seekers every Friday.