

Jim Cresswell

I am a senior automation engineer, developer, and consultant, with a focus on improving digital product delivery. I drive quality improvements through **automated testing strategy, creating technical demos and frameworks, and hands-on implementation**, shifting left automated testing and feedback, CI/CD, and communication strategy. I predominantly work with **JavaScript** stacks and have **Java** experience, usually on web products, including cloud and micro-service architectures.

I have leadership experience driving process and tooling decisions, creating and championing strategies, and mentoring technical and non-technical stakeholders.

I am also **a published physicist**, and enjoy applying systems thinking approaches to novel situations.

Please see online for **an up to date version of this CV**.

Contact

If you are interested in hiring me for consultancy, automation or development work please contact **jim@codescience.co.uk**.

If you want to talk about something else please contact **jim@jimcresswell.net**.

Employment

Head of Devops and Quality (consulting)

Oak (remote)

January 2021 to present

I lead on CI/CD and testing strategy and implementation, and developer experience, for the **Oak National Academy remote edtech apps**, created in response to the Covid crisis.

We work with cloud service providers including **Google Cloud Services, Cloudflare, GitHub, Vercel, BrowserStack, SonarCloud**

Senior Developer (consulting)

Oak (remote)

August 2020 to December 2020

I helped develop the **Oak National Academy remote edtech apps** from an early stage.

I worked with **React, Next.js, GraphQL**, and a variety of cloud data and service providers. I also drove improvements on code quality, CI, automated testing, and engineering best practice.

Head of Test (consulting)

Medicspot (remote)

April 2020 to July 2020

I led test automation and quality assurance strategy and process for a telemedicine technology start-up. I created full-stack automated test solutions in CI for a suite of Express and React apps (**JavaScript, Node, React, Express, Postgres**).

I drove quality as a culture adoption through education and engagement, in an agile and high-velocity team.

Founder

Obaith

January 2018 to December 2020

Obaith was a tech for good project exploring how digital services can support positive change on climate breakdown, biodiversity, and social connection, through networks of bottom-up community projects.

After several years of full-time research (what do these interrelated problems look like from a systems change perspective? What are the leverage points and scalable solutions? What's holding people back?), and network building, Obaith has been archived and the information collected will be used to start new projects.

Other Projects

January 2018 to now

I am continually developing my **technical skills** including **general test automation**, and have larger **portfolio projects**.

I have volunteered weekly for several years as a market gardener with the organic local-food movement **Growing Communities**. I am also the Digital Officer for the rewilding charity Wildlife Gardeners of Haggerston.

Programme QA Consultant

The Home Office (part-remote)

February 2017 to December 2017 (11 months)

I led QA automation strategy creation and adoption (including hands-on development) across an agile programme of 2 projects and 6 scrum teams creating a micro-service architecture public facing web service (Node + Java). My achievements included human-readable, automatically validated product specifications through coaching teams in BDD scenario/test case writing using Cucumber (and JavaScript, Java, Webdriver, Jenkins), creating working examples of new automated test approaches with a variety of technologies, and massively speeding up feedback from automated testing (shifting validation left, and faster and more stable UI tests). Strategy and results were communicated in audience appropriate ways to technical, product and management stakeholders through presentations, personal coaching, Slack and Confluence.

I created several test automation frameworks (**JavaScript/Node and Java**) from scratch, and many technical demos using industry standard technologies and tools (**Cucumber, Selenium (Node and Java bindings), Selenium Grid, SauceLabs, Mocha, JUnit, REST Assured, Pact, git, GitHub, GitLab, Jenkins, Jira, Confluence, Slack, IntelliJ IDEA, Webstorm**).

I **coordinated and communicated between architects, programme leads, analysts and QA and technical leads** to enable comprehensive automated validation and continuous rapid feedback. I advocated for business and user facing **specification by example** (supporting BDD), engineering facing micro-service testing (creating and improving test cases, advocating TDD), and the radical shifting left of validation and feedback timescales using **specification workshops, static code analysis, product and infrastructure-as-code unit tests (TDD), consumer-driven contract testing, GUI and API functional testing (BDD), blocking code merge on validation, testing micro-services in isolation, and whole-of-product level (end-to-end) testing**. I advocated for accessibility, performance and security testing becoming an automatic part of the release process

Travel and Self-Directed Research

January 2016 to January 2017

Travel in Australia, New Zealand and the U.S. I began researching various concepts for businesses and non-profit organisations.

QA Automation Consultant

British Airways (part-remote)

March 2015 to December 2015 (10 months)

I provided education and training for Specification by Example (building the right thing, **BDD**), and unit and integration testing approaches (building things right, **TDD**). I developed and advocated a long term strategy around continuous testing and continuous delivery, including championing the adoption of cloud technologies and supporting an incremental migration to a micro-services architecture. I supported shifting testing left, increasing the speed and stability of the UI tests, and improving reporting (and attention paid to) results in CI (Jenkins).

I drove awareness and adoption of software product delivery best practices and tools among executive, design and development teams, through planning sessions, presentations and digital communication. I introduced the test automation team (agile, scrum) to **git, GitHub, GitLab, and git supported agile development, leading the migration from SVN. I created test frameworks with Cucumber, Selenium WebDriver (JavaScript and Java APIs), Appium, Sauce Labs, Jenkins, and Jira.**

I co-created the business communication tool **Specs** (Node, NodeGit, HTML, CSS) designed to make product specifications written with Gherkin/Cucumber visible to non-technical stakeholders.

Software Engineer

We Predict

September 2014 to October 2014 (1 month)

We Predict is a global startup providing predictive analytics as a service.

Short contract: I created a customer-facing **data visualisation demo** using public sector data and **web technologies (d3.js, d3.chart, HTML5, JavaScript, ASP.NET MVC 5)** and contributed to an internal JavaScript data visualisation framework intended for eventual open-sourcing.

Labs Developer

FT Labs (Financial Times)

August 2011 to July 2014 (3 years)

I joined **FT Labs** while it was still the startup Assanka, which was **bought by the Financial Times** and became the web technology R&D group responsible for the development of the multi-award winning, cross-platform HTML5 and JavaScript **FT web app**.

As a web developer I contributed extensively to the FT web app code base in JavaScript, HTML5, CSS3 and PHP, using the FT Labs front-end MVC framework **Fruitmachine** (the big frameworks weren't around yet), **git**, and **GitHub**. This included requirement definition and analysis, feature development, testing, bug reporting and fixing, daily stand-ups, and sprint planning.

I took the technical lead on the delivery of the **FT Windows 8 app**, liaising with FT product managers, FT designers, Microsoft executives, and Microsoft tech evangelists. I led communication, defined requirements, and scheduled development. I also drove the creation of an experimental FT FirefoxOS app.

After 2 years I changed focus to **lead QA automation and strategy** for FT Labs, reporting to the directors. I introduced end-to-end testing using **WebDriver (Java) and Jenkins**, with a drive towards continuous integration and best practice; preventing development being blocked by broken code, and increasing delivery velocity. I created a test framework, encouraged developers to take responsibility for creating further tests (end-to-end, integration, unit), and **oversaw a team of testers**. I experimented with automated visual regression testing using the BBC's **Wraith** framework.

Research Programmer Analyst

Carnegie Mellon University in Qatar

June 2011 to July 2011 (1 month)

Short contract: to increase development speed I created an **automated functional test suite (in Perl, using a snapshot approach)** for a piece of astrophysics software.

PhD Researcher

The Institute for Cosmology and Gravitation, University of Portsmouth

September 2005 to December 2010 (5 years)

I planned and carried out research projects at the world class **Institute for Cosmology and Gravitation**, **developing mathematical models and computational pipelines**, and applying them to large astrophysical data sets, using model fitting algorithms and data visualisation techniques. The work was largely carried out in **C, Matlab, and SQL**.

I used data from the **Galaxy Zoo** citizen science project to challenge the then-conventional assumptions about the relationship between galaxy shape and colour.

I designed my publications, including my **thesis**, with the document markup language **L^AT_EX**.

Systems Engineer

Hewlett-Packard Laboratories for N-able

April 2009 to November 2010 (18 months)

I was hired to carry out software and hardware test plan design and execution for a HP storage product. A colleague and I quickly organised the individual manual efforts into a team effort to create **a test automation framework (Perl) used internally by HP for several years** afterwards.

Other experience

I have **taught mathematics and physics** to 14 to 25 year olds, been a tour guide, worked in retail, and made office furniture.

Education

The Institute of Cosmology and Gravitation, University of Portsmouth

Doctor of Philosophy (PhD), Astrophysics and Cosmology

2005 to 2010

Thesis: **Luminosity Functions and Galaxy Bias in the Sloan Digital Sky Survey**

Sussex University

Master of Science (M.Sc.), Cosmology

2004 to 2005

Thesis: Observing **Cosmological Topology**. Attempting to use cosmic microwave background data to determine if the Universe is finite in extent but multiply connected - like going out one side of a Pacman game and coming back in the other (C, Fortran).

University of Bath

Master of Physics (M.Phys.), Physics
1998 to 2002

Thesis: The Design and Construction of a **Theremin**. A Theremin is an early electronic musical instrument, conceived by the musician and inventor **Léon Theremin**, probably best known for its use in the theme tune of the original Star Trek. I also took classes in C and Matlab.

Interests

I am interested in putting regenerative process at the heart of every day life by applying whole-of-system thinking and theories of change to **ecological solutions to global problems**, **community networks**, and **cradle-to-cradle design**.

I ran as a councillor in the 2018 UK local elections with the party that came second in my ward. I would consider running again as an independent, on locally important issues, using lessons from **Flatpack Democracy**. I volunteer at a community-run **market garden** helping to bring **good food** to urban communities.

I am interested in how knowledge can be efficiently derived from data and communicated in meaningful and audience appropriate ways. I created a **data visualisation app** for some **World Bank metrics on development**. I created a **tic-tac-toe game** (**JavaScript**, **React**) including an **opponent AI algorithm** that is difficult, but not impossible, to beat.

CV source code

jimCresswell.net

LinkedIn

GitHub

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