# Overview

I am an enthusiastic and agile tech lead. I enjoy working with mixed ability teams where I use SCRUM techniques to diffuse stress in a project, to improve the confidence and productivity of the development team and raise their profile within the business. I also like to spend time liaising with stakeholders, challenging requirements, grooming stories, reviewing sprints and facilitating delivery.

Most of my experience is with the Microsoft stack, but I try to be agnostic about technologies that I use, my goal is to find the best fit for the business, not to push a particular framework or toolset.

# Recent qualifications

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| 2017 | Extending the Umbraco back office | | Umbraco.org |
| 2017 | Umbraco Application Integration | | Umbraco.org |
| 2016 | Certified Scrum Master | | Scrum Alliance |
| 2016 | Certified Scrum Developer | | Scrum Alliance |
| 2016 | Certified Scrum Product Owner | | Scrum Alliance |
| 2016 | Umbraco, asp.net MVC and Visual Studio | | Umbraco.org |
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| Qualified Instructor with Archery GB  Coach with British Fencing | | Course Planner with British Orienteering  First Aider (exp. 2020) | |

# Recent Experience

**January 2020 - February 2020 Senior Developer Phocas Software, Coventry**  
Working with teams in Australia, New Zealand and the US to finish off the alpha release of a financial reporting module for a BI suite.

**July 2019 - November 2019 Principal Engineer Sainsbury’s Tech, Coventry**  
Introduced systems thinking to product development teams, developed a strategy to replace monolithic web application with microservices, introduced Xamarin.Forms for mobile app development, mentored junior to mid-level software engineers, modern apprenticeships and graduates.

Solution Architecture, Business Analysis, Mentoring, C#, WebApi, oAuth, Azure, .net Core, SQL, JavaScript, React, XUnit, Xamarin/Xamarin.Forms, Agile, Git, DevOps, Docker

**May 2019 - June 2019 Umbraco Consultant NEC Group, Birmingham**  
An Umbraco 8 build for a brand-new entertainment venue – the idea was to leave them with a solution they could use as a template for future Umbraco builds.

**Jan 2019 - April 2019 Umbraco Consultant ITG-Connect, Wolverhampton**  
Optimising and updating large multilingual ecommerce applications and coaching the team to prepare them to move to Umbraco 8 Cloud.

**Jan 2018 - Nov 2018 Tech Lead AHDB, Warwickshire**Took a Domain driven approach to managing a complete overhaul of a key analytics system, eliminating GDPR risks and coupling between subsystems, enforcing best practices and performance standards.

Solution Architecture, Business Analysis, Mentoring, C#, WebApi, Cryptography, OWASP, oAuth, Azure, Cosmos .net Core, Db, Blob storage, SQL, SQL Azure, Web App hosting, CI/CD, AngularJs, SCSS, TFS, Jira, Nunit, Unit testing, Powershell, Internationalisation, Linguistics, SCRUM

**Jul 2017 - Dec 2017 Umbraco Consultant McCann Group, Birmingham**  
CMS build for a large public transport project, integrating with remote and local services. Managed a complex Git repository, responsible for pull requests and co-ordinating build packages.

**Feb 2017 - Jun 2017 Umbraco Consultant Bit-10, Coventry**Built an online training portal for Coventry Chamber of Commerce with booking and membership system.

Solution Architecture, Business Analysis, Umbraco 6 7, C#, SQL, Web Api, AngularJs, SCSS, TFS, Selenium, Jasmine, SpecFlow, Gherkin, Photoshop, SVG, SCRUM

**July 2016 - Nov 2016 Umbraco Consultant Trustmarque, Coventry**Designed a secure approval workflow for the Royal Society of Medicine to support whistle blowing and disciplinary cases, an event booking system and a document registry.

Solution Architecture, Business Analysis, Umbraco 6 7, C#, SQL, Web Api, jQuery, SCSS, Unit testing, SCRUM

**Nov 2015 - July 2016 Software Architect FWS , Coventry**Delivered a self-tuning multi-lingual risk management solution for universities and laboratories.

Solution Architecture, C#, .net Core, Microservices, Azure, Document Db, Redis, Sql Azure, Web API, Unit testing, Photoshop, SVG

**Jan 2015 - Nov 2015 Tech Lead The Hyperion Group, London**Delivered a multilingual white-label CMS platform and managed the rollout for a global insurance business.

Solution Architecture, Business Analysis, Training, Umbraco 7, Azure, C#, MVC, Microservices, .Net, Blob storage, SQL, SQL Azure, NPM, gulp, AngularJs, SCSS, Git, Unit testing, Internationalisation, mentoring, SCRUM

**Sep 2014 - Dec 2014 Senior Developer Sigma Technologies, Macclesfield**  
Integrated an asset management web application with a complex authentication and authorisation system – rolled out a re-platformed charity site that handled a peak load of 500 hits/minute .

Umbraco 4 6 7, C#, MVC, .Net, SQL, NPM, gulp, jQuery, LESS, Git, UX testing, Unit testing, Internationalisation

**Apr 2014 - Aug 2014 Tech Lead Finance Wales, Cardiff**A secure compliant information management system and intranet, integrated with Dynamics and Sharepoint.

Solution Architecture, Business Analysis, Training, Umbraco 7, C#, MVC, .Net, SQL, LESS, Sharepoint, Dynamics, Git, Integration testing, Unit testing, Photoshop, SCRUM

**Jan 2014 - Mar 2014 Lead Developer May-Fly Media, Bristol**Property management and booking service, integrated with Salesforce and third-party services.

Umbraco 6, C#, MVC, .Net, SQL, Knockout, Salesforce, oAuth, Photoshop, SCRUM

**Sep 2013 - Nov 2013 Umbraco Developer COMTEC, Cwmbran**  
Completed a complex Umbraco migration and automated the configuration workflow for 1500 travel sites.

Umbraco 4 6, C#, MVC, .net, SQL, XML, XSLT, Mercurial, Jenkins

**Jul 2013 - Dec 2013 Senior Developer Cab Studios, Alcester**  
Worked on a localised catalogue service for a multinational e-commerce site and a gift voucher system for Gordon Ramsey restaurants

Umbraco 7, C#, MVC, .Net, SQL, LESS, PDF, Git, UX testing, Internationalisation, Photoshop

KEY ROLES

2019 – SAINSBURY’S – mentoring engineers

I joined Sainsbury’s as a Principal Engineer supporting over 120 engineers across 15 product teams, with a focus on behaviours and practices. Each team is responsible for up to three ‘products’ (web/mobile applications/infrastructure) and they work in isolation, the lack of any standardisation meant that products were difficult to interop with and hard for other engineers to understand.

Teams are long-lived and are wholly responsible for their products, without external oversight this often resulted in monolithic applications using unfamiliar technologies. I encouraged them to run workshops to discuss their solution architecture, this prompted them to document confusing aspects of their solution and, in some cases, the feedback encouraged them to redesign it.

I worked with a group of product owners and architects to review the product catalogue, we identified a number of cross-cutting concerns that teams kept solving independently and several overlapping uses of business data. I drew up a strategy to repackage the business processes as reusable microservices, with a local package repository for the common code.

I worked with the design & UX teams to introduce senior engineers to the idea of systems thinking to help them understand the wider impact of their design decisions. This had a positive impact on a couple of teams who collaborated with potential consumers to develop APIs for their products and to work with other teams to solve common problems.

The scope of my role was changed during a reorganisation and I became a *de facto* Lead Engineer working with 2 product teams - overseeing 2 senior engineers, 5 associates and 3 apprentices.   
  
One of the teams was tasked with delivering 6 versions of a mobile app, but only had limited .net and React skills. I developed a prototype multi-platform app with push notifications using Xamarin.Forms and showed them how to leverage their C# skills and share code across the solution. I worked with a second team to port a power BI app to Xamarin and I left them with a reusable pattern to migrate the rest of their power apps using a simple MVVM/repository architecture.

2019 – ITG-Connect – Umbraco optimisation

I worked to redesign a proposed Umbraco application to eliminate 15,000 ‘configuration’ nodes, using Nested content and some custom angular filters to give users a streamlined ‘configuration grid’ for each product-line in each localised market - I extended the save event for some nodes to allow users to paste bulk configuration data from excel that automatically updated the nested content properties.

I worked to migrate a large (>200,000 node) multi-lingual catalogue CMS from Umbraco 6 to 7. We moved most of the data out of Umbraco, releasing enough resources and complexity to allow me to modernise the application, without changing any of the UX, improving the overall performance.

Connect were interested in using Umbraco 8 Cloud and asked me to run a two-day workshop to take the team through the process of migrating an application to the new platform. I wrote some PowerShell scripts to orchestrate setting up new solutions to fit into their existing CI/CD workflow.

<http://gear.jaguar.com>     <http://gear.landrover.com>

2018 – AHDB – Application redesign

I joined AHDB to help them fulfil an urgent contract with the Welsh government to get a live farming analytics tool (Farmbench) running in Welsh. I developed a strategy to manage the translation process and built a lightweight framework to manage dictionaries and live translations.

As part of my analysis, I identified problems with the architecture of the application, code quality and several security and GDPR issues. I proposed a new ‘aspect-oriented’ architecture, using Cosmos as a datastore, and led an inexperienced team through a complete redevelopment of the system.

I wrote an abstraction layer and implemented a ‘fluent’ repository pattern to help the team move over to Cosmos and designed an API using an attribute schema that allowed us to dynamically generate the front-end. I also built an enterprise-level shared account management service to centralise GDPR risks and a light-weight API to facilitate integration into other applications.

I spent a lot of time working on code quality with the team encouraging them to pair-programme to refactor, simplify, and document the codebase. I used SCRUM as an excuse to get the developers to network with the project’s stakeholders, to introduce simple change-control and review processes, and to set-up a continuous deployment pipeline.

The learning curve arising from migrating the data store to Cosmos removed the temptation to push business logic into the database, and I was able to condense 130 tables into eight document types and eliminate all the stored procedures, reducing the size of the codebase by 80%.

<http://farmbench.ahdb.org.uk>

2017 – McCann – Public transport Service UX

This was a complicated project with six teams in different offices taking a BDD approach to a complex systems integration project for a large bus company.

I was responsible for the client-facing Umbraco CMS, UX and for orchestrating the interactions across the back-end services – I worked with AngularJS to drive the dynamic aspects of the web front-end and SASS to give some structure to the presentation layer, with NPM and Gulp linting and building the CSS and JS payloads.

Each feature was managed in a different ‘primary’ branch, with each aspect of the feature managed on ‘subbranches’ by different teams – e.g. UX, Mobile, Model, API, Logic – these would quickly get out of sync. I worked to ensure that the primary feature branches always had a consistent set of functionality that could be deployed into the test/UAT environments.

<http://www.nationalexpress.com>    <http://www.nxbus.co.uk>

2016 – FWS – Risk Management System architecture

I designed an inventory management service targeted at laboratories handling controlled substances, supporting the 28 official languages of the EU. Working alongside a research chemist we developed a system to model risk-controlled interactions between different chemicals and develop a process to identify compound risks arising from changing environmental conditions – e.g. in the event of a fire or flood, etc.  We collected live data to train a Bayesian network to highlight labs at risk of non-compliance, to track and schedule audits and to ensure compliance with changing EU and national legislation.

2015 – The Hyperion Group – Global CMS rollout

I worked with an international insurance underwriting and broking group to help them adopt Umbraco as a platform for all of their web services. The project was almost a year behind schedule when I picked it up from an external agency, but I was able to rally the team and get the first phase of the project delivered before its ‘drop-dead’ date, taking over as interim Product Owner.

I extended Umbraco to support syndication, translation, content localisation, and overhauled the Umbraco messaging system and rendering pipeline to work on Azure. I also delivered a light-weight framework for building single-page applications.

I picked-up responsibility for supporting the content editors and worked with them to reduce the complexity of the CMS. I built pilot sites in Turkish, Finish and Hebrew to refine the UX and found ways to reduce the cost of rolling the system out to other markets. I mentored the setting up of CMS teams in eight countries and coached them through the process of delivering sites locally.

<http://www.hyperiongrp.com>   <http://www.howdengroup.com>   <http://www.dualunderwriting.com>

2014 – FINANCE WALES – INTRANET

I worked with the Welsh development bank to deliver an Umbraco Intranet solution. I coached their BA to work more like a Product Owner, facilitated workshops and ran it as a Scrum project.

I had to dig into the Umbraco source code to find ways to integrate it with Active Directory, SharePoint and Dynamics and extended the Umbraco interface to allow editors to customise document approval pathways, create workflows and light-weight ‘applications’.

I built a ‘social-media’ system to facilitate collaboration and encourage the tagging, and registration of resources from their data warehouse and SharePoint sites. This allowed me to develop a self-tuning natural language search tool to signpost users towards services, documents and resources across the business.

I wrote an ORM to emit a strongly typed map of the Umbraco data model and worked with the in-house development team to teach them how to build new views and services using tools they were familiar with. I coached the content delivery team and ran training for the administrators.

2013 – Mayfly Media – Salesforce Integration

I built a property management and booking service for a performing arts charity that pulled information from several agencies and online services into their Salesforce CRM, triggering workflows that pushed data into associated Umbraco nodes and a third-party ticketing engine.

2013 – COMTEC – Umbraco migration

Comtec took advantage of the fact that Umbraco 4 serialised the state of the CMS tree to a single XML file and used it as a configuration tool for their portfolio of white labelled travel sites. They wanted to upgrade to a more secure and stable version of Umbraco and my task was to mimic the (now obsolete) XML caching behaviour. I also helped them use Jenkins to control the propagation of configuration changes across their network of 1500 sites.