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Summary

Provider of end-to-end solutions ; capable of taking requirements at any level of detail and building out a robust, well-tested, scalable, maintainable Mobile, Web and Cloud presence.

Daily Stack:

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[Mobile client]

TypeScript / React / React Native / Zustand / GraphQL / urql / GraphQL Code Generator / React Navigation / React Native Paper

[Web client]

TypeScript / React (Function Components, Hooks) / Zustand / GraphQL / urql / GraphQL Code Generator / CSS / HTML

[Testing]

TypeScript / Jest / React Testing Library / "@testing-library/react-native" / Puppeteer / Supertest / mongodb-memory-server / ts-jest

[API]

TypeScript / Node.js / ts-node / nodemon / Express / JWT / GraphQL / Apollo Server / GraphQL Code Generator

[API integrations]

Twilio SendGrid (email)

[Microservices Infrastructure]

Terraform / Skaffold / kubectl / Kubernetes / Docker / NGINX Ingress Controller / Apache Kafka / Redis / GraphQL Mesh

[Data]

MongoDB / mongoose

[Cloud Hosting]

Digital Ocean

[Machine Learning #]

Tensorflow / Keras / Python

[Computer vision #]

OpenCV / Python

[CI/CD]

GitLab / Skaffold

[Source Control]
Git

(#) Currently on-hold during pivot

Experience



Chief Technology Officer and Developer One

Feb 2022 - Present (6 months +)

Building-out a distributed system designed to provide tiny response-times for millions of concurrent users interacting with the platform via Web browsers and Native Mobile Apps.

See 'Daily Stack' above for tech for this project.

adidas

Remote contractor

adidas

Apr 2021 - Nov 2021 (8 months)

Fully-remote project to deliver a bespoke browser-based 3D renderer. Choose tech stack / liaise with client to determine features, run demos, gather feedback / drive feature-development.

[Front-end / Back-end]

TypeScript (JavaScript) / React (TypeScript) / Zustand / Python / Flask / 3D / Three.js / "react-three/fiber" / "react-three/drei" / Ray Marching / Signed Distance Functions / Custom GLSL Shaders / WebGL / Geometry generation, processing / Wavefront OBJ / DRACO / npm / Git / GitHub.



Chief Technology Officer and Developer One

[Unnamed (NDA)] Pre-investment Startup

Jan 2020 - Dec 2020 (1 year)

[Front-end / Back-end / DevOps / Cloud]

JavaScript / TypeScript / NodeJs / Redis / GraphQL / Apollo GraphQL Server and Client /

TypeGraphQL / TypeORM / PostgreSQL / React / Google Cloud Platform (GCP) / Docker / Kubernetes (K8s) / Vanilla CSS / yarn / Git / Twilio / VsCode / Figma / slack

For this project, I took screen designs created in figma by the founder and turned them into a suite of robust, performant cloud-hosted web applications to allow the founder to bring their business model to life.

This of course included choosing a tech stack, specifying the cloud infrastructure, building CI/CD pipelines etc.



Architect / Developer

perroh Ltd

Feb 2018 - Jan 2020 (2 years)

[Front-end / Back-end / Mobile / Cloud]

Building tech stack for start-up - one aspect of which involves mapping the interiors of buildings via smartphone:

- * yarn, Babel, ES6/2016/2017/2018, eslint, Jest
- * NodeJs, esm, nodemon, Express
- * ReactJs, material-ui, inkscape, React Native, socket.io, react-native-webrtc
- * ARCore, OpenCV
- * Google Cloud Platform / App Engine / Cloud Firestore
- * git, vscode, Postman



Graph2Data2 extraction project

Feb 2018 - Oct 2018 (9 months)

[Front-end]

For this project, I built a suite of Web Components which allowed data within published research to be accurately extracted and easily reused.

Continuing work with UCL/Imperial College London/Edinburgh University, started whilst at NICE; this time a direct contract.

Published papers often omit to provide tabular data relevant to the question of interest, introducing difficulty for those hoping to make use of the findings.

A ground-up rewrite of the tool I developed as a proof of concept whilst at NICE. The web-based tool is delivered as three Web Components and so are able to be inserted in any web page, regardless of other technologies used

They were developed using React.JS and allow:

- * PDF files to be imported directly into the client browser without back-end involvement
- * Display and annotation of the PDF
- * 'Reverse-engineering' of the data used to draw the graph
- * Extraction of this data

Feature demo (5 minute video): <https://github.com/easyTree/files/blob/master/DemoOfLabelAxisVariations2.mp4?raw=true> - probably downloads immediately, click after download to view - 05:11

The components may be chained together to create various user workflows.



Contract Software Development Consultant

NICE - National Institute for Health and Care Excellence

Jan 2016 - Feb 2017 (1 year 2 months)

[Front-end / Back-end / Cloud]

ASP.Net MVC / HTML5 / F# / C# / XML / JSON / Visual Studio 2015 / RabbitMQ / Git / GitHub / Azure / Docker / NUnit / Testing / TeamCity / TDD / Functional Programming / Microservices / CSS / JavaScript / jQuery / AJAX / (Twitter-) Bootstrap / ReSharper / Low-level PDF parsing / Message Queuing / Integrations / Frequent remote updates and demos

Whilst at NICE, I was responsible for the R&D, design and development for two projects related to Meta Analysis / Systematic Review:

* A published-paper de-duplicator capable of identifying duplicates within batches of 40,000+ papers in reasonable time on a laptop-powered device. Deployed with microservice queued back-end in F#.NET and web front-end.

* Web-based tools to allow extraction of graphical data from PDFs associated with published papers for later ingestion as part of Meta Analysis / Systematic Review. React components packaged as Web Components to be dropped into an existing product (Demo of a feature from the version developed with the next UCL engagement (see above) here: <https://github.com/easyTree/files/blob/master/DemoOfLabelAxisVariations2.mp4?raw=true> - probably downloads immediately, click after download to view - 05:11

The end-customer for this project was University College London (UCL).

Project described here:

* <https://wellcomeopenresearch.org/articles/3-157/v3>

* <https://pubmed.ncbi.nlm.nih.gov/30809592/>



Architect / Developer

perroh Ltd

Jun 2015 - Jan 2016 (8 months)

[Mobile]

Android App-build project

Android Studio; Android SDK; Java; Otto; dagger2; Butter Knife; OpenStego; MPChartLib; ZXing; D3.js; ASP.Net MVC / Web API



Consultant Developer

Certero

Jul 2014 - Sep 2014 (3 months)

[Front-end / Back-end / Mobile]

ASP.NET MVC 3 (Razor) / HTML 5 / C# 4.51 / Entity Framework 4.1; WCF; Visual Studio 2010; CSS / JavaScript / jQuery / AJAX; ReSharper; Android; IOS; C# Windows Apps; C++

Certero are specialist providers of Software Asset Management solutions

Part of the mobile team building the Mobile Device Management (MDM) aspects of the cross-platform Software Asset Management (SAM) product 'Asset Studio' - for Android and IOS 7, integrating to a C# ASP.Net back-end and Administration Portal.

Catalent

Contract Software Development Consultant

Catalent Pharma Solutions

Jan 2014 - Jul 2014 (7 months)

[Front-end / Back-end]

ASP.NET MVC 5 (Razor) / HTML 5 / mobile-first / XML / XSD / XPATH / C# 4.51 / Entity Framework 6.1.0; Visual Studio 2013; Ninject 3.0; AutoMapper; JSON2; LinqToXSD; QuickGraph; CSS / Less (Twitter-) Bootstrap 3; JavaScript / jQuery; TDD (nUnit / ReSharper / moq); Inkscape.

Catalent are, self-descriptively, 'the world's #1 drug development, delivery and supply partner for

drugs, biologics and consumer health products’.

<http://www.catalent.com/>

Developed an innovative, robust and stylish greenfield solution to manage ordering and distribution of drugs needed for trials. A SPA, providing slice-and-dice overview/drill-down, reporting and actioning of orders going through the system – SOA / IBM WebMethods / Queueing.

Delivered on-time with supporting tools, to (slightly variable) functional specifications with the freedom to determine the choice of technologies.



Technical Architect / Developer

perroh Ltd.

Aug 2013 - Nov 2013 (4 months)

[Front-end / Back-end]

ASP.NET MVC 5 / Web API / WCF / HTML 5 / mobile-first / C# 4.51 / Entity Framework 6.0 (code-first / migrations); Visual Studio 2013; Ninject 3.0; NodaTime; CSS / Less / (Twitter-) BootStrap 3; JavaScript / jQuery; TDD (nUnit / ReSharper / Ninject / moq; Unit- and Integration-Test Suites – favouring state-based tests); headless browser automation; server-side parsing in C#

In-house project - aggregate and present data scraped from multiple sources around the web.

Flexible design - allowing easy addition of new scraping algorithms / data-sources; robust - innovative use of headless browser; scheduled refreshes; developed using classical-TDD (favouring state-based over behaviour-based tests) - fully integration- and unit-tested.

Mobile-first HTML5 with BootStrap / jQuery.



Contract Consultant/Developer

Cheshire Shared Services

Mar 2012 - Jun 2013 (1 year 4 months)

[Front-end / Back-end]

ASP.NET MVC 3.0 / ASP.NET Web Forms / C# 4.0, 3.5, 2.0 / Entity Framework 4.3, 5.0 / Linq to SQL; SQL Server 2005 / 2008; JavaScript (jQuery, AJAX, DHTML) / CSS / Team Foundation Server 2010 (TFS 2010) / Functional specifications / Prototyping UI designs / Requirements Analysis, Estimating / Working to well-defined deadlines.

<http://www.cheshirewestandchester.gov.uk/>

Cheshire Shared Services are a result of the consolidation of the IT function for several local councils. As such, they have a continuous stream of varied projects underway making for an interesting and challenging role, within a pleasant working environment.

Delivered solutions, on-time, based around requirements- and functional-specifications.

Contract Consultant/Developer

Triangle Software

Feb 2012 - Mar 2012 (2 months)

[Front-end / Back-end]

ASP.NET MVC 2 / C# 3.5 / Entity Framework; JavaScript (jQuery, AJAX, DHTML); CSS; Team Foundation Server 2010 (TFS 2010); SQL Server 2008 R2; Detailed specifications; Liaising with end-user/client.

<http://www.trianglesoftware.co.uk/>

Working on the second-phase of a portal project for one of Triangle's accountancy clients.

Freelance Developer

Social Circle

Mar 2009 - Mar 2012 (3 years 1 month)

[Front-end / Back-end]

ASP.NET / C# 3.5; Classic-ASP; JavaScript (jQuery, AJAX, DHTML); Flash CS4; Silverlight.

social-circle.co.uk

SocialCircle are an innovative, relatively new, real-world social-networking company. They provide a ready-made social-group to individual customers and offer event-management and staff-benefits packages to corporate clients around Greater Manchester.

Worked closely with the owner and a graphic designer to help develop the web-strategy and look-and-feel as required.

Redesigned/re-implemented most of an existing site and back-end as-needed to provide the owner with the flexibility and level of automation needed.

Contract Consultant/Developer

Promethean

Jun 2011 - Oct 2011 (5 months)

[Front-end / Back-end]

www.prometheanworld.com – www.prometheanplanet.com

Visual Studio 2010; ASP.NET MVC3 (Razor); C# 4.0; Entity Framework 4.1; SQL Server 2008 R2; JavaScript (jQuery, AJAX, DHTML); CSS, DotLess; T4 templates; Team Foundation Server 2010 (TFS 2010), Active Directory, WCF, Agile (Scrum.)

Promethean are worldwide leaders in the manufacture of hardware-, software- and web-based learning tools.

On-site contract working on a variety of projects including:

* Single-developer project developing an MVC3 web application that integrates with TFS 2010 to inject work items received by a public-facing web application.

* Assisted in bringing a large-scale international community-site to completion including automatic single-sign on from remote offices, functional and stylistic changes as discussed with the project owner.

* Part of a team developing a multi-language global education-site



Contract Developer

EdgeThreeSixty, Digital Solutions Agency

Feb 2011 - Apr 2011 (3 months)

[Front-end / Back-end]

www.sdesign1.com

Visual Studio 2010; ASP.NET MVC2; C# 4.0; Entity Framework 4 (POCO template); SQL Server 2008 / Visual Studio database projects; JavaScript (jQuery, AJAX, DHTML); CSS; AutoMapper (automapper.codeplex.com); MVC Turbine (turbineproject.com); Unity (unity.codeplex.com); RhinoMocks; NUnit; T4 templates; BaseCamp (basecamphq.com); Mockingbird (gomockingbird.com); SVN/AnkhSVN/TortoiseSVN

sdesign1 are specialists in designing accessible websites/web-applications and online-marketing.

Short-term remote-working contract as part of a team of five, building a public-sector web-application offering goods and services to the site's target customers using cutting-edge technologies.

Ownership-of / responsible-for a vertical slice of the project - Daily online-meetings with the team to discuss progress and share problems - Designed and implemented the solution using all of the above technologies – Managed project time-scales – Liaised with client as needed.

Worked to a tight deadline and specific set of visual requirements - Creative use of project technologies to deliver the site exactly as specified.



Contract Developer

Ashfield Digital & Creative

Sep 2010 - Dec 2010 (4 months)

[Front-end / Back-end]

www.emed-media.com

ASP.NET / C# 4.0; Entity Framework 4; SQL Server 2005 (Database administration, Stored Procedures, Views, Indexes; Normalization, SSIS); JavaScript (jQuery, DHTML); SpringFramework.Net; T4 templates; CSS; ClassicASP; Photoshop CS5; Flash CS5; IIS 6 hosting

e-Med Media are a medical communications company and a member of the KnowledgePoint360 Group, a global leader in medical communications.

Contract with a mandate to develop a new version of an existing long-standing product using the latest technologies.

Worked closely with one of three other contractors as we developed a strategy for implementing the new product in a manner which ticked all the required boxes.

Worked with project managers to enhance existing products and portals to support their ongoing business needs for a range of projects, including the public-facing www.hiv10.com / www.hiv10.com/webcastsearch.asp



Contract Developer

WorkMobile

Mar 2010 - Jul 2010 (5 months)

[Front-end / Back-end]

www.esay-solutions.co.uk

ASP.Net / C# 3.5; SQL Server 2005 (Database administration, Stored Procedures, Views, Indexes, Normalization); JavaScript (jQuery, AJAX, DHTML); CSS; Gimp (www.gimp.org); Agile (Scrum); SagePay; WURFL (wurfl.sourceforge.net/); Git

eSay Solutions are leaders in delivering mobile data-capture solutions.

Contract with a mandate to develop the portal to eSAY's WorkMobile mobile data-capture product – available at <https://www.esayworkmobile.co.uk>. WorkMobile allows customers with a mobile workforce to design customized electronic forms which are then pushed-out to handsets, allowing in-the-field data-capture, with data being returned in real-time for viewing / reporting via the back-office portal (see www.esay-solutions.co.uk/product/features for more details.)

Implemented all required portal features, including look-and-feel, detection of mobile handset to allow the appropriate client software to be installed, AJAX/DHTML form-designer, object-management, reporting screens, billing / payment-collection screens using SagePay (www.sagepay.com), secure database-storage of customer details.

Worked closely with product owners to gather requirements prior to implementation.

Worked on a variety of additional projects to provide support, as-needed.



Software Development Specialist

Lokulus

Jan 2006 - Feb 2009 (3 years 2 months)

[Front-end / Back-end]

www.thisisnumero.com

Worked as part of a sixteen-strong multidisciplinary team developing a large, complex, SOA-based multi-channel customer-interaction hub with rich web front-end, providing support for call-centre clients.

Daily activities: requirements-capture; full implementation of vertical slices of functionality through all tiers of the application, including database design and population, db-abstraction layer, schema-generated DTOs & service tier, web application tier, custom AJAX components calling asynchronously to services returning JSON payloads, unit tests; draft documentation; providing support to other developers/QA needing information within my area of competence/interest.

Education



The University of Manchester

Computer Science, Databases, Compilers, Algorithms, Specification

1987 - 1991

1987-1991 BSc. (Hons.) Computer Science

University of Manchester (Owens) Computer Science Department, Oxford Road, Manchester

Graduated with Honours in Computer Science.

Exposure to: Analysis and Design methodologies / Formal Software Specification / Structured Programming in high level languages / Assembler / Database Theory and Design / Parallel Architecture and Programming / Compiler Design / Electronics / Language Theory / Algorithmic Complexity and Design

Skills

JavaScript • Node.js • React.js • Web Development • Software Development • Test Driven Development • Testing • Scrum • Front-end Development • CSS