Leigh Hunt
Software Developer

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About Me

Hi, my name's Leigh and I'm a Software Developer.

With nearly 30 years' experience in the industry, I've been working in the New Zealand IT community for 17 years, including the last 14 as a business owner and contractor.

I mainly work in the DotNet and GIS spaces, and have strong interests in data visualisation and communication. I also design and develop software for embedded devices for data acquisition.

If you would like to read a more in-depth story about me, here's an article.

Experience

Venari Ltd
Founder, Technical Director, Software Developer
November 2013 – Present
venari.co.nz

GasNet (Lead Developer, Architect)
C#, PostgreSQL, Azure CI/CD

Developed a prototype for GasNet's MDMS Smart Meter Data Ingestion system. This trial system captures data from multiple manufacturers' data loggers and allows GasNet to record and analyse gas usage for their customers. Work has also been carried out to integrate MDMS with their legacy MiDAS system.

Maintaining and enhancing GasNet's MiDAS retailer billing system.

Northland Regional Council (Developer)
```
C#, WSDL/SOAP, REST/JSON, TechOne, SQL Spatial
```

Further developed NRC's TechOne Adaptor, a system that integrates IRIS (Integrated Regional Information System) with TechOne Finance, to port the integration to TechOne's CiAnywhere cloud-based service. Work involved moving parts of the system from a legacy WSDL/SOAP interface to their newer REST/JSON interface and moving from an old version of DotNet Framework to a newer DotNet Core code base.

Offered specialist knowledge in TechOne integration, and other technologies.

Lynker Analytics and Zealandia Consulting (Architect and Developer)
```
C#, PostgreSQL, Python, Azure CI/CD, C++, Embedded
```

Developed and deployed several Envirocam systems to monitor several construction and industrial sites in Auckland. Two versions of the device were created, the first a Raspberry Pi Zero using Python, and a second Microcontroller based version using C++ with the aim of reducing power requirements and the costs of components.

Following the initial 6-month development phase, I ran a 6-month fixed-price support contract for the cameras including servicing and on-going development.

Lynker Analytics (Lead Developer)
```
C#, PostgreSQL, PostGIS, CI/CD, AWS ECS, Docker, LeafletJS
```

Developed the CarbonCommit geospatial data entry system, part of the Net Carbon Zero Mapping System for Silver Fern Farms and their suppliers and farmers to verify carbon credits as part of their Net Zero Carbon programme. In 2023 Silver Farm Farms & Lynker Analytics won the Datamars Livestock Technology Award at the Beef and Lamb New Zealand Awards for The Net Carbon Zero Mapping System.

Manulife Investment Management Timberland and Agriculture Inc (formally HNRG) (Lead Developer)
```
C#, SQL, ArcGIS, Azure CI/CD
```

Designed, Developed and managed backend API for MIMTA's new internal Latitude Forestry Management System, and deployed to US and NZ workforce.

Eagle Technology Group (Lead Developer)
`C#, React/Redux, SQL, ArcGIS, Docker, AWS`

Subcontracted to Eagle, designing and developing software for various clients including:

- NZ Police
- Auckland Transport
- Transpower
- Ballance
- Department of Conservation
- NZ Archaeological Association

BureauCo (Lead Developer)
`C#, ArcGIS, Silverlight`

Maintained and enhanced BureauCo's Plan.IT.Road system

Astara Technologies (Lead Developer)
`NodeJS, AngularJS, Embedded, Docker`

Supported and Dockerised Astara's embedded Battery Management System visualisation software.

Whirinaki Whare Taonga (Lead Developer, Support)
`Silverstripe, JavaScript`

Maintained and updated Whirinaki's website

Splice Group Ltd
Founder, Technical Director, Principal Consultant, Analyst/Developer
2010 - 2013

Splice were finalists in the Cyber Gold category of the 2012 Wellington Gold Awards and won the ICT Category in the 2011 Westpac Porirua City Business Excellence Awards.

Northland Regional Council (Developer)
`C#, WSDL/SOAP, TechOne, SQL Spatial`

Integrated NRC's TechOne finance system with the cross-regional Integrated Regional Information System, enabling data entered into IRIS to be synchronised with TechOne. Implemented a WCF service that published WSDL interface consumed by IRIS, and in turn wrote data to TechOne using its web service.

AGS Ltd (Developer)
```
C#, ServiceStack, ArcGIS
```

Sub-contracted to Eagle Technology Ltd to develop an unexploded ordnance clearance request application. Developed using Service Stack, SQL Server and ArcGIS, the application enabled users to request land near oil fields in Iraq to be cleared of UXO. The application used the ArcGIS JavaScript API, Bootstrap, and dual-factor authentication.

BureauCo (Analyst/Developer)
```
C#, Silverlight, ArcGIS
```

Migrated PLAN.IT.road roading corridor management application from ArcIMS to ArcGIS and Silverlight. Made several enhancements and stability improvements to the application, including enabling support for The National Code of Practice for Utility Operators' Access to Transport Corridors.

Hutt City Council, Selwyn District Council, Kapiti District Council, Upper Hutt City Council (Analyst/Developer)
```
C#, ArcGIS
```

Developed Splice Group's LIM application, streamlining councils' manual LIM processes by automating retrieval of data from geospatial and finance systems, and generating final output. Integrated with ArcGIS, TechnologyOne (PropertyCI), and NCS.

Astara Technologies (Developer)
```
NodeJS, Embedded
```

Astara Technologies developed battery management systems (BMS) and needed to visualise the data recorded by two electric motorbikes. The Energy Management Dashboard took data from the BMS, integrated GPS and video feed, and eased analysis by displaying a sychronised video feed, map and graphs representing battery performance.

Wellington City Council (Analyst/Developer)
```
ArcGIS, JavaScript
```

Sub-contracted to Eagle Technology Ltd, undertook an independent Architecture Review for WCC's internal CityView application, a legacy Java/ArcGIS/JavaScript system which was experiencing a number of performance issues. Produced a report with a number of recommendations and helped WCC implement some of those recommendations.

GasNet (Developer)
```
C#, SQL
```

Took over support and maintenance of GasNet's retailer billing system, developing enhancements to support legislative changes to the gas industry in New Zealand.

Auckland City Council (Analyst/Developer)
```
C#, ArcGIS ArcObjects
```

Implemented customisations to ArcGIS to enable ACC's legacy smallworld application to be migrated to Esri ArcGIS. Also implemented an ETL component that allowed FME to synchronise the data between the two different systems.

Explorer Graphics Ltd
Senior GIS Developer
2008 - 2010

XPLview (Team Leader, Developer)
```
C#, JavaScript, ArcGIS, ArcIMS
```

Led a team developing EGL's XPLview application, which enabled councils to expose their ArcIMS and ArcGIS servers, integrated with financial and property systems, as public facing web applications.

SurveyLab Ike (Developer)
```
ArcPad, ArcGIS, VB Script
```

Implemented customisations to ArcPad to allow users to quickly record information during surveys, including cemetery headstones and water service infrastructure. Data could then be synchronised into ArcGIS for further analysis.

Swordfish Business Solutions (UK)
Director, Analyst/Developer
2005 - 20007

Freshfields Bruckhaus Deringer (Developer)
```
C#
```

Worked in London Finance office, supporting "FirmControl" and Generic Reporting applications, used to monitor the financial performance of this £780m firm.

KA Technology Ltd (Analyst/Developer)
```
C#, Office Open XML
```

Subcontracted to KA Technology, developed a Document Assembly Module for KA Technology's legal sector client and integrated with a Document Management System.

Highways Agency (Analyst/Developer)
`C++, SQL`

Enhancements to the Energy Procurement System Project, which in its first year of operation saved the client over $1M.

Atkins Management Consultants (UK)
Software Developer
1998 – 2005
www.atkinsglobal.com

The Office of Rail Regulation (Analyst/Developer)
`MS Office Automation, SQL, C#`

Several engagements with ORR over 5 years, resulting in:

- Specification and development of a SQL Server based contact management system.
- Integrated the contact management system with the organisation's document management and production system.
- Supported internal development of a database recording accessibility issues at rail stations, and reporting KPIs.
- Developed an application for managing the workflow for the department's scanned documents.

British Airports Authority (Business Analyst)
`Business Analysis`

Business Analyst for BAA's 600+ user, mission critical, Staff Information System at Heathrow and Stansted. Performed stakeholder analysis and led workshops and interviews with key airside and landside users from 28 internal departments and external organisations, gathering business requirements for the replacement system. At the end of this £1M+ project's feasibility phase, I formed part of the supplier selection panel. Later produced the Site Acceptance Test plan for the installation of the Automated Public Announcement System at terminals 1-4.

Highways Agency (Developer)
`C++, SQL`

Development of the Energy Procurement System Project, which in its first year of operation saved the client over $1M.

The National Archives (Developer)
`ASP Classic, SQL`

Enhanced and developed The National Archives Document Ordering System (DORIS), and document import system (DUPION). Captured requirements for a space management system,

to help TNA staff to manage the document repositories (currently spanning over 100 miles of shelving).

Food Standards Agency (Technical Architect/Developer, Team Leader)
`C#, SQL`

Designed, developed and led a team of four developers for FSA's Nutrient Databank application for collating and calculating food nutritional information.

British Energy (Developer)
`C#`

Responsible for development and deployment of patches to GCORE, a system used to model the effect of seismic activity on nuclear reactor cores.

UK Hydrographic Office (Developer)
`C++, Oracle`

Supported UKHO port their Cobol/DG based system to C++/Windows NT as part of a Y2K GIS Data migration project. Instigated and conducted code reviews of new and existing code being produced by members of Laser-Scan's 25+ strong GOTHIC development team.

Financial Planning Software Ltd (UK)
Programmer
1995-1998

`C++, SQL, MSDE`

Part of a small team that designed, implemented and tested the new Windows version of the company's DOS based financial planning software suite. The project was developed using Visual C++ and OOD methods to produce flexible and maintainable code.

Projects

Envirocam
January 2022 – Present
https://venari.co.nz/envirocam

```
C#, PostgreSQL, Python, Azure CI/CD, Embedded
```

Originating as a tool for creating long term off-grid timelapses of construction and infrastructure projects spanning months or years, this became a platform for remote imagery acquisition. Several of these cameras have been used in the field for a year by a Council for near realtime remote collection of evidence of waterway pollution.

Using a Raspberry Pi, Pi Juice and solar power, these devices can run for months or years without external power, and send telemetry and imagery to a central server ensuring that in the event of theft, imagery is preserved.

Offered both as open-source software and hardware with option for self-hosting, and as a managed service to construction industry and enforcement agencies in New Zealand.

Drone Hyperlapse Service
December 2018 – Present
https://venari.co.nz/hyperlapse

```
Litchi, Adobe After Effects, RPA Flight Management (CAA Part 101)
```

In addition to Drone photography and videography, I initiated and refined a drone hyperlapse creation service to help organisations communicate progress of their projects to stakeholders and the public. By aligning and stitching together multiple captures of a site, we create a seamless story to show the progression of projects across many months or years.

Pro bono IT Advice and Support
November 2016 – Present

I give IT support and advice to a local Women's Refuge Service in Porirua. In addition to general IT support and procurement assistance, I migrated their office environment to Office 365 and helped migrate systems and records to the cloud.

Coder Dojo Porirua
2013 – 2019
https://coderdojo.nz

I founded the Porirua CoderDojo, part of a global collection of free clubs inspiring and teaching children aged 5-15 about coding. We used the graphical programming language Scratch for beginners and JavaScript and Arduino for older kids to expose young inquisitive minds to programming and computational thinking.

Tile38 Viewer
September 2019

```
C#, Docker, Leaflet
```

Developed a tool to visualise geofences and realtime events in Tile38 on a map

Education

Birmingham University
BSc (Hons) Computer Science & Software Engineering
1992 - 1995

A Little More About Me

As part of a household of 7, life is often pretty busy but when I do find time, alongside my interests in software development and drone flying, some of my other interests and hobbies are:

- Cycling
- Photography
- Brewing Beer
- Building/Making

Leigh Hunt - leigh@venari.co.nz - References on request