PERSONAL DETAILS

Date of birth:	9th February 1971
Location:	Tauranga, New Zealand
Email:	andrew@andrewt.com
Telephone:	+64 (0) 21 334097

PROFILE

I am a skilled and highly motivated software developer with over 25 years of commercial design and programming experience. During this time I have been involved in all aspects of software development, from initial requirements and design through to testing and support. I have worked on a wide range of projects, from firmware to websites, on a variety of platforms.

SKILLS SUMMARY

Programming Languages/Technologies

C#/VB .Net (8+ years)
C/C++ (10+ years)
Java (5+ years)
Kotlin (1 year)
Swift (1 year)
Javascript/Typescript (5 years); some experience with Angular 2/jQuery/KendoUI
IoC/DI with Castle Windsor/Autofac/Unity/LinFu/Dagger (Android)/Swinject (iOS)
Entity Framework and NHibernate ORMs

Unit testing in C# using xUnit/NUnit/MSTest, Rhino Mocks (3.3+) and Moq (4.0+)
Unit testing in Android and iOS development
Unit testing in Javascript using Jasmine
Continuous Integration/deployment using CruiseControl/TFS/Jenkins/Azure DevOps
Source Control with Git, TFS, Mercurial and Subversion

Microsoft ASP.NET and MVC 2 – 5 (including WebAPI)
Microsoft .NET Framework 1.0 – 4.8
Microsoft SQL Server
Microsoft WPF and WCF
Microsoft Visual Studio all versions
Android Development using Android Studio, IntelliJ IDEA and Eclipse
iOS Development using Xcode
Microsoft Windows Mobile development using Embedded Visual C++ 3.0/4.0 and .NET Compact Framework
Network programming, Winsock, TCP/IP and application level protocols (eg. HTTP, FTP)
Microsoft Visual C++ 1.0-6.0, MFC 2.0-6.0, ATL; Win32 SDK for Windows 9x, NT, 2000 and XP; OLE/COM
Symbian OS 7.0-9.2 (UIQ 2.0-3.1)

WORK EXPERIENCE

October 2016 – December 2018: Bluelab Corporation

Primary technologies: Android (Java), iOS (Swift), C#, ASP.NET, MVC 5 Web API, SQL Server, Azure, Embedded C

As a **senior software engineer** I completed a number of projects at Bluelab:

- a new Azure-hosted service that receives plant monitoring data from Bluelab devices (via a desktop app); several hundred devices reporting every 20 seconds or so
- Android and iOS apps communicating with the service to allow users to see the above data
- an Android app to provide the UI for a new monitoring device communicating via Bluetooth (I also laid the groundwork for the iOS version before I left)
- rewrote the firmware for the flagship Pro Controller device; written in C with extensive unit tests

I also provided input to the UI/UX for many of these, and collaborated on other software/firmware projects.

May 2016 – August 2016: BitRocket (contract)

Primary technologies: C#, ASP.NET, MVC 5 Web API, SQL Server 2014, Typescript, Angular 2, D3, HTML, Azure

I was the **sole developer** on a new project to implement a bespoke web-based grazing planner application for a farm owner. This was a multi-farm, multi-user system, allowing farm managers to optimise the use of their paddocks by planning where and when to place their cattle/sheep.

It consists of an Angular 2 single page app, communicating with an MVC-based REST API, through to a SQL Server database. The API and database are hosted in Azure, and are deployed automatically from a Visual Studio Team Services (now Azure DevOps) CI build.

February 2015 – April 2016: Reckon (contract)

Primary technologies: C#, ASP.NET, MVC 5, SQL Server 2012/2014, Javascript (jQuery/KendoUI), HTML

I was a **senior developer** on the Reckon One team, Reckon's cloud accounting product. This is a multi-tier web application, and I worked on all areas of the project stack and some of the internal services it uses – Javascript/HTML front-end, MVC/C#/WCF, Entity Framework, SQL Server Database.

Although a contractor, I quickly established myself as part of the team and became known for producing quality work – as a result I was often given some of the more tricky (and interesting) tasks. I also helped drive the adoption of unit testing (using **xUnit** for C# and **Jasmine** for Javascript) and had responsibility for maintaining the internal nuget package for shared, cross-project functionality.

November 2013 – June 2014: Wynyard Group

Primary technologies: C#, ASP.NET, SignalR, HTML, Javascript, Powershell

As a **senior developer** of the *Common Modules* team I was involved in implementing cross-product functionality across Wynyard's suite of Crime Analytics applications.

I mainly worked on integrating the user logon flow between two of their products (*Financial Crime* and *Intelligence*) and improving their automated build/install processes.

September 2012 – November 2013: MCOM/Fiserv

Primary technologies: C#, ASP.NET, MVC, WCF, SQL Server, HTML, Javascript

I was a **senior developer** in the *Mobiliti Advantage* team, helping to produce their mobile banking product. This is a large-scale, multi-tier solution consisting of multiple mobile/web applications, web services, database and bank integration components. This core product is then customised for individual banks by the professional services team, for whom I worked for my first 11 months at MCOM.

I worked on various aspects of a number of different projects: implementing key infrastructure modules in **C#**; integrating with internal and external services using **WCF**; building customised mobile banking websites using **ASP.NET/MVC** and **Javascript**. Unit testing was done with **MSTest**, and behavioural testing with **SpecFlow**.

As a senior member of the team I also contributed to the internal documentation wiki and helped mentor more junior developers.

January 2010 – June 2012: Swinton Insurance

Primary technologies: C#, ASP.NET, MVC, SQL Server, HTML, Javascript

I was a **senior developer** on the web team at Swinton, mainly working on the customer quote-and-buy websites and the associated web service interfaces to insurance aggregators (CompareTheMarket, etc).

When I joined the company the sites were all developed in **ASP.NET** and I was a key member in the successful redesign of all the customer-facing quote websites using **MVC** and **Castle Windsor IoC**.

All development was test-driven using **NUnit** and **Rhino Mocks**, with **Continuous Integration** using CruiseControl. I helped introduce **TDD** in **Javascript** using **Jasmine**, and I integrated that into the CI builds leading to a large reduction in Javascript defects (especially regressions). I also automated most of the post-build publish/deployment steps that were previously manual processes.

I also developed a secure system for storing credit card details to enable Swinton to take continuous payments from those cards. This used **Castle Windsor** and **NHibernate**, and a **HSM** (Hardware Security Module) for secure key storage.

February 2008 – January 2010: Cold End Services (contract)

Primary technologies: C#, WPF, WCF, C++, Windows Embedded

Cold End Services sell and refurbish inspection machines that work on glass bottle production lines. Their existing machines had Intel 486-based computer controllers that are over 20 years old and so, as the parts for these controllers are becoming impossible to replace, I was contracted to design and write replacement control software for a modern PC. The application is written in **C#/.Net 3.5** with some **C++** at the core for low-level machine control, and tested with **NUnit** and **Rhino Mocks**.

I separated the application into a **WPF** UI for configuring the machine and viewing a variety of status information, and a service at the back end that actually controls the machine. These two pieces communicate via **WCF**, providing a level of robustness (UI and service are separate processes) and allowing the control UI to run remotely if required.

The software is running in a number of plants worldwide and has processed millions of bottles.

October 2006 – February 2008: Sony Ericsson (contract)

Primary technologies: C++, Symbian

I worked as a **software engineer** in the Messaging and Multimedia team at Sony Ericsson, on a number of different smartphones. I helped develop various applications including: MMS client; Walkman (music) Player; Image Editor; Blogging. The development was all in **C++**, on various flavours of **Symbian** (the core OS) and **UIQ** (the UI/windowing layer). I also helped the team implement a more **test-driven** approach to how they produced their software.

December 2004 – January 2010: Lightbulb Software Ltd.

Primary technologies: C#, C++, Windows Mobile, WinForms, ASP.NET

I was the **owner and lead developer** of Lightbulb Software, a company I started so that I could work on some ideas I'd had for mobile devices. The main product we worked on was Worldolio, a world clock and geographical information application (https://worldolio.azurewebsites.net/). There are versions for Pocket PC, Smartphone, desktop PC, as well as standard and mobile websites. We used .net 1.0/1.1 for web and desktop versions and predominantly **C++** on the mobile devices (for performance reasons).

I eventually made this freeware and it had several hundred downloads.

November 2000 – December 2004: VICS Ltd

Primary technologies: C++, Windows Mobile, Symbian, COM

VICS was a leading provider of video compression and video streaming technology (they were subsequently acquired by 2ergo). They developed solutions for delivering video to a number of platforms, specifically mobile devices.

I joined VICS soon after the company's inception and spent most of my time as the **lead developer** for their video player products for mobile devices. The player applications communicated with a remote video portal to handle user payment and DRM (Digital Rights Management), as well as streaming video clips.

The players were designed around a portable core for playing videos and network communication, for which I developed my own cross platform subset of Microsoft's COM architecture. As a result, I implemented player applications for **PocketPC** based PDAs, **Microsoft Smartphones** and **Symbian** mobile phones with a minimum of platform-specific development.

I was also involved in the research and design of the **mobile portal** which was a one-stop-shop for users to browse and buy videos, ringtones, etc. via their phones, and just before I left I worked on improving the in-house video encoding tools with Microsoft **DirectX** technologies (specifically **DirectShow** and **DirectShow Editing Services**).

February 1994 – November 2000: Surfcontrol Plc

Primary technologies: C/C++, WinForms, ODBC, Windows sockets, Windows services/device drivers

Surfcontrol Plc (now part of Websense) is one of the leading companies in the Content Security market. They develop a suite of internet access control and monitoring products for the education, home and business markets.

I was an **architect** of the original SurfControl product, and I co-invented some of the technology on which the application was based (US Patent #6219786), namely a method to monitor and control internet connections from an arbitrary machine on a network.

All development was in C/C++ using **Microsoft Visual C++** and I worked on most aspects of the product including: a Windows NT device driver that 'sniffs' network packets and can block access at the packet level; a Windows NT service that logs connection information to a database via ODBC; and a number of administration user interface applications. I often acted as **team leader** for various projects.

Before working on SurfControl I was a **software engineer** on MultiView, a suite of UNIX connectivity applications providing terminal emulation, file transfer, email, etc.

September 1992 – February 1994: National Computing Centre (www.ncc.co.uk)

I was employed as a new graduate at the NCC working on CentreLink, a client/server data retrieval tool. CentreLink allowed client PCs to access data from mainframe and UNIX hosts via a number of communication protocols such as TCP/IP and IPX/ODI. It was written for Windows 3.1 in C++.

OTHER EXPERIENCE/OPEN SOURCE

In my spare time I work on my own app (GP Central) and a couple of open source projects with a friend.

GP Central

Primary technologies: Android, Java, Azure, C#, ASP.NET, MVC, SQLite

I developed GP Central to provide everything a Formula 1 fan needs in one mobile app: race calendar, results, championship standings and news feeds (RSS). It is available on Google Play at https://play.google.com/store/apps/details?id=com.andrewt.gpcentral

As there are no publicly available result feeds, I also had to implement my own service to provide results to the app. This service is implemented using ASP.NET Web API, hosted on **Microsoft Azure**, and automatically updates its own local database by scraping the formula1.com website.

Trailblazer (https://bitbucket.org/andrewandderek/trailblazer)

Trailblazer is a simple, quick and easy to use **Android** track recorder, for hiking, running, cycling etc, written in **Kotlin**. The app was inspired by MyTracks - a Google app that is now deprecated.

It is published in the Play Store: https://play.google.com/store/apps/details?id=com.andrewandderek.trailblazer

PodcastUtilities (https://github.com/derekwilson/PodcastUtilities)

This is a set of tools for downloading and synchronising podcasts. It is not intended to compete with iTunes, but is a simple, configurable, small-footprint means of downloading podcasts onto your pc and synchronising them to your phone/mp3 player.

It is written in **C#/.Net Core**, with the **LinFu IoC** container, and uses **NUnit** and **Rhino Mocks** for testing.

EDUCATION/QUALIFICATIONS

October 1989 – July 1992: University of Newcastle-upon-Tyne (UK)

1st class BSc (Hons) degree in Computing Science and Maths

September 1994 – June 1995: Macclesfield College, Macclesfield (UK)

1 'A' level: Business Studies

September 1982 – June 1989: South Holderness School, Preston, Hull (UK)

3 'A' levels: Computing, Maths, Physics
1 'AO' level: Maths
10 'O' levels (including Maths and English)

HOBBIES/INTERESTS

I have always been into cars and motor racing (hence my GP Central mobile app), and I am currently rebuilding/restoring a 1967 Ford Mustang.

I also play badminton at Tauranga Badminton Club; I regularly go hiking/tramping; and I usually have a DIY project or two on the go.