David Waterfield

3 Faires Close

Borrowash

Derby

DE72 3XP

07981 551003

David.Waterfield@tiscali.co.uk

# Profile

A Software Developer with 25 years experience in software development, formerly in C++ under Windows operating systems, the last 6 years developing in C# under the .NET framework.

Accustomed to working as part of large or small teams, alone, or in charge of teams, specifying best practise in software development standards to ensure that error free, to specification, maintainable software is delivered.

Current role is one of Lead Applications Developer, responsible for the successful completion of projects from the system analysis, design and implementation, through to testing, user acceptance, deployment and subsequent client support.

# Key Skills

* Problem Solving
* Agile Development Methodologies – SCRUM, Pair Programming
* Test Driven Development, Continuous Integration (Cruise Control)
* 6 years C# (2 years VB.Net) and the .NET framework
* 14 years C++ on Windows Operating Systems
* 10 years Object Orientated Analysis and Design
* Mentoring / Training
* Design Patterns
* .Net 1.1, 2.0, 3.0, 3.5, 4.0
* MS Visual Studio .Net 2003,2005,2008, 2010 / Visual Studio Team System
* Linq 2 SQL Classes
* Entity Framework
* 10 years SQL Server 2000, 2005, 2008
* Windows Server 2008, MS Virtual Server 2005 / VMWare server/workstation
* MS Reporting Services 2000, 2005, 2008

# Responsibilities

* Producing error free, to specification, maintainable software
* Designing frameworks and system architecture for other developers to utilise
* Training / mentoring less experienced team members
* Advising upon best practise, conducting code reviews to ensure that a high level of quality is maintained throughout the product
* Solving development problems and design issues
* Keeping abreast of current technologies and trends
* Providing product knowledge expertise to Technical Services Group to ensure projects’ hardware requirements meet specifications
* Providing development expertise to Research Group to ensure the successful completion of their proof of concepts

# Employment History

2008 – Present **Experian – Integrated Marketing Division**

Lead Applications Developer - Worked as part of a team of 10 developers responsible for migrating two disparate legacy codebases based upon an architecture using WinForms, web services, remoting and a Sybase database, into a single code base, n-tier client server architecture application using WCF web services and multiple SQL Server databases.

Had individual responsibility for analysing parts of the existing architecture and designing a replacement architecture utilising technologies to suit the .Net environment. This also included implementing the required client and server side system design, and the subsequent coding / development testing thereafter.

Worked with the training department in order to determine the existing undocumented functionality to ensure that no functionality from the two products was lost during this process.

The application (a direct marketing and Campaign Planning application) is now being used by both Experian and a newly formed joint venture company owned by Sky and Experian (called Quantum IQ), as the basis of all their future products in the large database marketing arena for customers including Centrica, Northern Rock and the Labour Party.

Worked on a C# Silverlight call centre application for Zurich, managing the work of contractors as required. Was responsible for designing and implementing server side functionality including the SQL Server database schema and a data access layer that utilised a Linq2SQLClasses object model, and LINQ to achieve rapid completion of the required business logic including optimistic concurrency.

Worked with client side Silverlight developers, implementing functionality and exposing it over WCF web services to satisfy client side application requirements as needed, so that work stayed on schedule.

Worked with project managers and business analysts to ensure that requirements were correctly implemented, discussing possible solutions and alternatives when requirements were uncertain or had not been finalised.

**Achievements**

* Designed an implemented a licensing system, enabling functionality such as limits on number of users known to the system, limits on number of users concurrently logged in, and the ability of server side components to run on designated servers only, ensuring that solution would also work on multiple leg environments where server names would not remain fixed from one request to the next.
* Solved problem of older 32bit C++ components being unable to be executed from 64bit .Net applications by writing a COM+ wrapper to host the 32bit process. This quickly and efficiently solved the problem without incurring unpalatable alternatives such as having to build both 32bit and 64bit installers or re-compiling the underlying components with a 64bit C++ compiler.

Received a thank you from the Principal Developer for keeping the project on schedule.

* Migrated several projects that used SQL Server 2005 to SQL Server 2008 so the new FILESTREAM syntax could be used to efficiently store and access binary directly on the Windows file system.
* Introduced the new MERGE statement into stored procs as required to remove the need for separate INSERT, UPDATE and DELETE stored procs so as to aid maintenance of existing systems.
* Designed, implemented and documented a new build / release /deployment process including continuous integration with Cruise Control and unit tests to ensure the codebase was always in a good working state.

Replaced inflexible, time consuming manual MSBuild components, with Setup projects that allowed releases to created and subsequently installed in minutes rather than hours. Solved several problems such as how to move existing deployed databases forward in terms of both physical schema and logical data with the use of numbered SQL scripts for each release.

* Solved the problem of how to have an internationalized installation process that allowed automatic custom installation dependent upon factors such as OS type / 32bit or 64bit by implementing a custom front end onto Microsoft installer packages.

Implemented the solution after performing analysis and research on available installer technologies including Wix, Install Shield and existing in house installation techniques.

* Implemented a suite of System Usage Reports for a call centre application to enable the examination of statistics such as number of calls answered, number of calls closed and incorrect logins. Designed the database schema so that system usage statistics for the past year rather than the expected month could be persisted using minimal database space so as not to impact expected data sizes in line with contractual agreements.
* Solved application problems that occurred when installing products on multi server environments, including that of transactions being promoted from local to distributed transactions when the app was moved from a single server to distinct web/app and database servers. Solved this by investigation and subsequently configuring the MS Distributed Transaction Co-ordinator.
* Solved problem of spurious runtime application crashes when creating Excel spreadsheets and Word documents directly from existing applications when numerous versions, or no versions of Microsoft Office were installed on client computers.

Introduced use of office interop components to ensure static type checking at compile time rather than the late binding techniques that were previously used.

* Implemented SQL Server Reporting Services reports for a prototype application, advising on the differences between SSRS 2005 and 2008, giving a presentation to the Head of Pre Sales and the divisional director as part of a proof of concept project. The reports even though only intended as proof of concept, were later shipped with the final product as an example of what could be achieved.

Received a thank you from the Head of Pre Sales for my work performed in ensuring that the project went into production.

* Installed and configured SQL Server Reporting Services 2008 for the National Express team and advised them upon how to implement reports in both Business Intelligence Development Studio (Visual Studio) and ad hoc model based reports in Report Builder to suit their business needs.

Received a thank you from the National Express Team Manager for performing this unplanned work at short notice.

* Supported the Pre Sales Team with installing and configuring applications on laptops to be used for presentations to Adidas and Financial Industry events at Earl’s Court.
* Assisted less experienced team members with their work, performing mentoring and solving development problems to ensure that projects stayed on track.
* Took part in the yearly disaster recovery event, listing business critical systems, travelling to an external disaster recovery site to test the facilities are appropriate for prolonged off-site working, and to ensure that connectivity to the corporate lan is available.

2004 – 2008 **Experian - Information Solutions Division**

Worked initially as part of a team of 12 developers responsible for developing an enterprise level distributed application that allows technical users to design client systems using a WinForms VISO style workflow application that persists user system designs to a SQL 2000 database from which an ASP.Net “Publisher” component produces a BEPL like language in XML that is executed by a runtime engine.

The client systems generated range from all manner of credit application systems for customers such as HBos, Royal Bank Of Scotland, Barclays Bank, Wesleyan Bank, Lehman Brothers and HMRC, to the tracking of criminal investigations and locating of suspects for the Police.

Worked for the last 18 months in the role of SCRUM Master/Technical Lead for team of 8 developers on the front end C# WinForms application, the main responsibilities being:

1. Ensure Product Backlog items identified for the sprint are technically achievable and fit in with the existing design.
2. Ensure all technical tasks are identified to complete work items.
3. Ensure the estimates for technical tasks are realistic.
4. Providing daily technical support and guidance to the Sprint team is provided.
5. Providing support to the Workstream Leader’s weekly report.
6. Raising sprint issues with Workstream Leader as they arise.

**Achievements**

* Analysed a critical system that was suffering from intermittent timeouts of web services between client and server causing subsequent corruption of data.

Put in place an immediate short term solution and went on to re-design the existing application architecture to remove the problem altogether, adding transaction support to guarantee no further data loss.

Ensured that the requirements of Business Analysts who worked out of the office were not affected by the redesign.

The re-designed system also had greatly improved performance.

Received a thank you from the Product Owners for the work performed.

* Introduced configurable compression of serialised XML communication between client and server via web services, to reduce saving/loading of persisted object model to database from minutes to seconds.

This enabled the company’s dedicated link from Nottingham to Bangalore India to require significantly less bandwidth and hence a cost saving for Experian.

Received personal thank you from Head of Software Development and Programme Manager for this work.

* Re-factored a data mapping module that was an integral part of the application but had been written by contractors in a very short space of time before complete business rules had been fully established.

Liaised with Product Owners, gathering requirements and subsequently added features such as input validation, logical correctness checking and the ability for Business Analysts to effectively use the component for its intended purpose.

* Performed all software release builds and subsequent out of hours software release and SQL server database migrations, ensuring there was no interruption to client systems.
* Implemented, built and released a bespoke version of core software so that a product development team could quickly produce a “template” system for a client, enabling a system to be delivered to a client within a very short space of time.

Merged the resulting SQL database back into the main development database without disrupting the ongoing work of either development teams or client system build teams.

Received thank you from Head of all Client Build teams, HBos Project Manager and Business Analysts for successfully completing extra work above what expected.

* Implemented a suite of “Audit Reports” using MS Reporting Services to enable development teams to analyse business objects usage and dependencies within the SQL Server database.

Received thank you from Product Owners for the solving a long standing business problem.

* Analysed Data Management component (Data access layer) in response to performance problems identified by runtime team. Re-implemented data retrieval algorithms, added suitable database indexing and lowered SQL isolation levels to reduce typical database read operations from over 1½ minutes to 5 seconds.

Wrote configuration utility complete with release notes and full back-out procedure to enable runtime team to easily make database alterations on multiple client servers with no chance of human error as the new component was released.

Worked with runtime teams out of hours to ensure the successful installation and configuration of the component on all the server environments, through to the live client systems.

Received thank you from Head of Client Support team, Head of Software Development and colleagues in runtime team for performing this work and subsequent support.

* Successfully completed secondment to the runtime team responsible for releasing and installing all of the development team’s software onto live servers.

The aim of the secondment being to build up links and lines of communication between the two teams and both impart and receive system knowledge enabling a better end product for clients.

Solved several problems regarding misconceptions regarding how the software worked that had previously caused many delays in promoting software releases between server environments.

Received very good feedback from the runtime team leader.

* Provided in house product support to users and also supported runtime team by performing knowledge transfer sessions regarding the installation and deployment of software components.
* Provided development consultancy to the Research Team and Technical Services division on a proof of concept where software was to be installed in Nottingham but accessed remotely in Bangalore India via Citrix technology.

Solved all software related technical problems, advising upon infrastructure required, altering software as appropriate when problems were identified.

Received a company “Game On” Award for 'Commitment to Delivery' - personally thanked by Divisional director, Head of Software Development and Offshore Workers Project Manager.

* Wrote extensive technical documentation to enable colleagues in the U.S.A. to install and configure a distributed system. Provided support to the Head of Client Build Teams during her U.S.A. visit to train users. Stayed late when required so support was available despite the time difference.
* Designed and implemented a C# WinForms utility at short notice to solve a sudden requirement for extracting runtime data in XML for client reporting purposes.

Received thank you from Delivery Team Manager for producing work without impacting end date of ongoing sprint work.

* Completed Wesleyan Bank project ahead of time. Added functionality for converting XML to .CSV files to give client more flexibility.

Received thank you from project’s Business Analyst for completing extra work.

* Installed and configured virtual servers using MS Virtual Server to complete a proof of concept for development team to prove that .Net 1.1 system components would be unaffected by having .Net 3 and .Net 3.5 components installed.
* Performed on call support including early morning checks for HBos team on live servers, ensuring that systems were operating as expected, liaising with HBos project manager as required.

2000 - 2004 **Experian – Strategic Solutions Division**

Senior Analyst Programmer working on financial software for International Credit Bureaux responsible for ensuring that development work is produced to specification, overseeing the work of others, while helping them to develop their skills through mentoring and training sessions.

The division’s main product was a Credit Application System, comprising of a web based front end, communicating with a C++ “engine”, containing the business logic, via Component Object Model (COM) interfaces, that in turn accesses a relational database (DB2) via ODBC.

**Achievements**

* Successfully completed the department’s “transition” from unmanaged C++ to the managed .NET world, enabling full re-use of existing software components whilst allowing maximum productivity via C# development under .NET.
* Worked as part of a team of 5, successfully developing and maintaining Credit Bureaux systems for countries such as Kuwait, Saudi Arabia, Poland and Russia.
* Designed and implemented an interpreter with a “little language” to allow the configuration of input data streams to the application to be specified using a language script without requiring core software to be rebuilt.
* Factored out core functionality into a base product that could be reused to enable the team to deliver complete Bureau systems in 3 months rather than the previous year of development
* Designed and implemented software components including a Name and Address Matching system that executes soundEx and phonetic matching algorithms on incoming data via an interpreter to enable subsequent system customisation by client developers.
* Improved the performance of the teams automated build process by removing dependencies and other inefficiencies to reduce the time taken from several hours to 20 minutes

1995 - 2000 **Experian – Micromarketing Division**

Senior Analyst Programmer working as part of a core team of 3 experienced developers chosen for their C++ experience to design and implement the core engine of a demographic software product, simultaneously supporting and co-ordinating development work with an “outer” team of 20 developers.

The product comprised of a three tier architecture with a graphical user interface (GUI) written using the Microsoft Foundation Classes (MFC), utilising a middle business layer written in C++ using the Standard Template Library (STL), accessing data sources via the Microsoft JET database engine and Open Database Connectivity (ODBC) drivers.

**Achievements**

* Solved a data access layer performance problem by designing and implementing an object orientated database to enable transparent serialisation / de-serialisation of system objects by developers.
* Designed and implemented class libraries of components to enable “business layer” and “GUI” developers to complete their work and deliver the required functionality.
* Spread C++ knowledge around the team by performing mentoring and knowledge sharing sessions on best practise.
* Introduced refactoring and software design patterns to the team.

1986 – 1995 **Gleeds Chartered Quantity Surveyors**

Developed and supported applications for U.K. and European Offices written in C++.

Clients included Glaxo, Marks & Spencers and Asda Gazely.

Responsible for a team of four developers, ensuring their skills developed.

Responsible for evaluating and advising on suitable software development technologies and best practise.

**Achievements**

* Moved all software development from Basic to C++ to increase system performance and to allow more complex products to be developed within limited memory constraints. This enabled quicker delivery of projects through software re-use / greater availability of 3rd party components, and also increased application performance leading to greater usability and productivity for end users.
* Managed the move from the world of MS-DOS to Windows for all the company’s products, solving any technical problems that occurred.
* Provided in-house customer support for all U.K. and international offices regarding software products and release schedules.
* Setup networks in Nottingham, Leeds, Manchester and other U.K. offices, building servers, installing applications, writing menu software, laying network cables as required.

# Training Courses

2008 Windows Communication Foundation

2007 Developing Microsoft ASP.NET Web Applications Using Visual Studio .NET

2007 Programming with Microsoft ADO.NET

2007 Programming Microsoft SQL Server 2000 Database

2003 C# .NET Software Development Course

1992 Object Orientated Analysis and Design in C++

# Education / Qualifications

B/TEC National Diploma in Computer Science

1 ‘A’ Level in Computer Science, 6 ‘O’ Levels including English Language and Mathematics

# Personal Details

Date of Birth : 31st March 1966

Marital Status : Single