

Christopher Wickens MEng

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I am a forward-thinking software engineer, driven by the desire to become an expert in the field of mobile application development.

Professional Skills

2 years' experience using .NET technologies (3.5, 4, 4.5) in commercial environments.

Known programming languages include:

- C# (5.0)
- Objective C (2.0)
- C++ (98)
- Java (SE 7)
- VB.NET

Android development experience using the Eclipse and Android Studio IDEs.

iOS development experience using the Xcode IDE and CocoaTouch libraries.

Network programming experience using technologies including **JavaScript, ASP.NET MVC, WCF.**

Experience with **modifying relational database management systems using SQL and SQLite.**

Familiar with **Git, Subversion, Team Foundation Server and Mercurial** source control technologies.

Experience with the **Agile (Scrum) development methodology in a development team.**

Experience with **XNA (3.1 and 4), OpenGL (3, 4, ES) and DirectX (9, 10 and 11) technologies.**

Experience with parsing customer requirements and producing functional specification documents, user stories and work items.

Experience with the entire software development lifecycle from a developer's perspective: requirements capture, analysis & design, development, testing, documentation, release and post-release support.

Experience developing bespoke software from the ground up as well as integrating new functionality into existing systems.

Familiar with the **Visual Studio IDE (versions 2008-2013).**

Regularly develop systems with an **object-oriented design and pragmatic programming practices – dependency injection, automated unit testing, error logging, DRY code.**

Experience

Summer 2013 – Present

Applications Developer

C A Design Services

- Worked as part of a development team to produce and maintain bespoke space planning software for multiple supermarket clients.
- Currently working with a retailer to develop a bespoke AutoCAD 2015 add-in and WCF service in C# that is responsible for planning and validating store areas, then collating and sending the information to the service to be stored in a SQL Server database. Made use of Ninject to ensure a readable, flexible codebase and automatic error logging using ELMAH.
- Developed software prototypes using a range of technologies including iOS, Android, .NET and HTML/JavaScript.
- Currently building a space planning prototype for Android using the latest support libraries and material design principles.
- Built an iOS prototype for the recording and maintenance of communication equipment, making use of various CocoaPods including RestKit.
- Worked with a retailer from the initial planning phase to integrate their vision for petrol filling stations into their existing store planning system using the AutoCAD .NET API, WCF and SQL Server technologies. Wrote and maintained automated integration tests to ensure critical components of the software worked as intended.
- Created a shared codebase backed by automated tests that separated each customer's business logic from any implementation of AutoCAD, for reduced development times across all AutoCAD projects, the ability to code closer to the problem domain, and increased software quality.
- Developed an interactive store planning prototype running on Android devices using OpenGL ES, capable of downloading store data from a REST service, rendering it as a 2D store plan and allowing translation, rotation and scaling of individual fixtures using touch controls.

Autumn 2012 – Spring 2013
Software Developer
 Seed Software (work experience)

- Worked in a four person team to successfully design, develop and test Seed Software's ACTV system, which highlights gaps in fire brigade coverage.
- Helped develop a backend WCF service in C# that reads in geographical and live asset data from SQL Server databases, performs routing calculations for each asset and generates heat map images to send to the ACTV website.
- Contributed to the development of the ACTV website, which periodically requests the latest heat map, asset and incident data from the server and renders them onto an interactive, configurable map using the OpenLayers JavaScript library.
- Shipped the initial release to Cleveland Fire Brigade service and supported the product after launch with necessary fixes and installation guidance.
- Documented necessary changes for adapting the system to be sold to other fire brigade services.
- Maintained regular communication with customers and end users to ensure a high quality final product.
- Presented the software to customers and end users, receiving feedback and making changes to suit their requirements.
- Set up portable versions of the software that were demonstrated during customer presentations and trade shows.
- Created a manual test suite using Microsoft Test Manager that tested the system's features thoroughly.
- Used Microsoft Team Foundation Server to manage the Scrum sprint backlogs, source control and test suite.

Autumn 2009 – Summer 2013
 University of Hull

Achieved a first class Master of Engineering in Computer Science with Games Development. Developed a real-time 3D desert island visualisation in DirectX 11 using advanced graphical techniques. Studied physics calculations and implemented them into an accurate 3D golf ball simulation. Developed multiple interactive visual prototypes using XNA 3.1, DirectX 9.0/10.0 and OpenGL 3.0 technologies.

Created a distributed shopping checkout system using Windows Communication Foundation, ensuring reliability and security.

Module name	Grade
Real Time Graphics	1 st
<ul style="list-style-type: none"> • Used C++ and DirectX 11 to implement a 3D real time visualisation, utilising vertex and pixel shaders to generate a final image. • Created easy-to-read UML diagrams to analyse and design an object-oriented system. 	
Advanced Rendering and Artificial Intelligence	1 st
<ul style="list-style-type: none"> • Used C++ and DirectX 11 to create advanced graphical effects including tessellated surfaces and ray casting, utilising all stages of the graphics pipeline. • Created an AI ant player for an artificial life game using C#. 	
Commercial Games Development	1 st
<ul style="list-style-type: none"> • Led a programming team to the successful development of a 2D Tower Defence prototype. • Attended and coordinated regularly scheduled group programming sessions. 	
Simulation and Concurrency	1 st
<ul style="list-style-type: none"> • Created a networked, multithreaded physics simulation in OpenGL/C++ that uses advanced integration and collision techniques. 	
Games Programming and Advanced Graphics	1 st
<ul style="list-style-type: none"> • Worked with a team to develop a 3D maze navigation game for DirectX 9 and PlayStation Portable in C and C++. • Made use of the Model-View-Controller pattern for easier porting between the two platforms. • Learned how to use the DirectX API and PSP SDK during development. • Regularly scheduled and attended group programming sessions. • Achieved a 100% mark for the coursework. 	

Autumn 2007 – Spring 2009
 East Norfolk Sixth Form College
 A-level qualifications in **Maths** (B) and **Computing** (C).