

# SEAN RYAN

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## Professional Summary

Motivated and highly skilled Software Developer with 7+ years experience and a solid academic record in Software Development, I have worked as a Freelancer and also in small to large teams for medium firms and large multinational companies.

I offer my professional Software Development services in Augmented Reality, Virtual Reality, 3D Graphics, VFX, Artificial Intelligence, Gameplay, Audio & New Media.

## Skills

### Programming Languages

- C, C++, C#, Objective-C

### Programming API's

- STL, COM, Media Foundation

### Data Languages

- XML, JSON, SQL

### Concepts & Design Patterns

- OOP, UML, Singleton, Factory, Observer, State, Adapter, MVC

### Platforms

- Win32, Windows 10 (UWP), iOS, Android, Linux

### IDE

- Visual Studio, Visual Studio Code, QT Creator,
- X-Code, Eclipse

### Graphics API's

- OpenGL, GLSL, Direct 3D, HLSL

### Soft Skills

- Organisation

### Game Engines

- Unity 3D, Monogame

### AI

- State Machines, Steering Behaviours, Autonomous Agents, Neural Networks

### Networking Protocols and API's

- TCP / UDP IP, HTTP, REST, Winsock, CURL

### Cryptography API's

- CryptoPP, OpenSSL

### Database

- SQL, PostgreSQL

### Source Control

- GIT, Sourcetree, SVN

### Project Management

- JIRA, SCRUM

### Creative

- 3D Modelling (3Ds Max, Maya), Adobe Photoshop

- Communication
- Interpersonal
- Creative Thinking
- Teamwork
- Management
- Problem Solving

## Work History

### Software Engineer

Sept 2018 - Current

Personal projects and development

Zurich, Switzerland

- Learning Unreal Engine
- Cryptocurrency wallet based on the Bitcoin Protocol for Windows 10 (UWP)
  - C#.NET, .NET Core, Visual Studio 2017, Nbitcoin, NBXplorer, Linux, Bitcoin full node, REST, HTTP

### Software Engineer

Nov 2017 - Aug 2018

New Voice - (Permanent)

Zurich, Switzerland

- Developing interfaces for telecommunication and alarm systems utilising C++, C# .NET, TCP/IP, HTTP, XML, JSON, Winforms, Visual Studio

### TSS Software Engineer

Sept 2016 - Oct 2017

Pilatus Aircraft - (Contract)

Stans, Switzerland

- Designed, developed and tested Mission critical software for pilot training simulations utilising C++, QT, Boost & CryptoPP (Hash Cryptography)

### Software Engineer

Dec 2016 - Mar 2017

(Personal UWP Projects)

- Developed a Media Player app for the Universal Windows Platform, includes advanced codec playback, cloud API's for media access (Dropbox, Google Drive & One Drive), In-App Purchases & Ads.
  - C#, Visual Studio 2015, FFmpeg, REST, Windows 10 (UWP).
- Developed cryptocurrency wallet based on the Bitcoin Protocol for Windows 10 (UWP)
  - C#.NET, .NET Core, Visual Studio 2017, Nbitcoin, NBXplorer, Linux, Bitcoin full node, REST, HTTP

### Programming Teacher

Mar 2015 - Jul 2016

The Academy of Interactive Entertainment - (Contract)

Melbourne, VIC

- Tuition of 3D Graphics and GPU shader development with C++ & OpenGL to 2nd year Advanced Diploma and Bachelor Degree students enrolled in the Professional Games Development (Software Development) and Games and Virtual Worlds (Programming) courses
- Tuition of C++ to 1st year Advanced Diploma students enrolled in the Professional Games Development (Software Development) course
- Tuition of Unity3D with C# to high school students enrolled in the Games Development holiday course

## Software Engineer / Project Manager

May 2013 - Sept 2013

Disney-Pixar Australia - (Freelance)

Melbourne, Australia

- Developed Augmented Reality experiential application for the worldwide launch of the Monsters University film
  - Development of back-end and front-end AR application on windows utilising C++, DirectX 9, Media Foundation, GIT & Visual Studio.

Golden Plains Shire - (Freelance)

- Developed Augmented Reality iOS application for local council, target and end result similar to that of Nokia City Lens application.
  - Development of back-end and front-end AR application for iOS & Android utilising Objective-C, X-Code, Java, Eclipse

## Software Engineer

Oct 2012 - May 2013

Wicked Witch Software - (Contract)

Melbourne, Australia

- AFL Live 2 video game for Xbox 360 & Windows PC
- In this fixed term contract role I was a C++ Software Engineer working on the UI team where I contributed to the development of approximately 99 main menu screens and 3D character creator.
- Development took place in the company's in-house game engine and all UI items were hand coded in C++ in the engine's UI subsystem

## Software Engineer

Feb 2012 - Oct 2012

Tkm9 - Full Service Agency - (Permanent)

Melbourne, Australia

- Developed 2D Augmented Reality overlay application for Blackberry South East Asia utilising C++, Visual Studio, OpenGL, Open CV, XML & GIT
- Developed 2D Augmented Reality overlay application for local Football club utilising C++, Visual Studio, OpenGL, Open CV, XML & GIT

## Software Engineer

Mar 2011 - Dec 2011

Konami Australia - (Permanent)

Sydney, Australia

- C++ Software Engineer developing slot/poker machine games on the front-end utilising C++, Visual Studio, 2D Graphics and animation API's (Direct X, Violet)
- In this role I worked in a large team consisting of Software Development, Art, Animation, Mathematics, QA & Compliance departments

## Hotel Manager

Oct 2000 - Mar 2005

Melbourne, Australia

- Staff Management
- Banking
- Cash Handling
- Customer Service

## Education

### **Bachelor Of Interactive Entertainment: Games Programming**

2014

SAE Institute / Qantm College

Brisbane, QLD

This was a specialist Games Development course that primarily focused on Software Development for video games utilising C++. In the course I learnt solid Object Oriented Programming concepts and core disciplines within games development such:

- 3D Graphics
- Artificial Intelligence
- Gameplay

The course also introduced other non programming focused subjects such as:

- Narrative & Story-telling
- Game Design
- 3D Modelling

### **Advanced Diploma of Professional Game Development: Software Development**

2010

The Academy Of Interactive Entertainment

Melbourne, VIC

This was a specialist Games Development course that primarily focused on Software Development for video games utilising C++. In the course I learnt solid Object Oriented Programming concepts and core disciplines within games development such:

- 3D Graphics
- Artificial Intelligence
- Gameplay

### **Diploma: Multimedia**

2008

The Northern Melbourne Institute Of TAFE

Melbourne, VIC

This Diploma course focused on media creation with various packages of the Adobe creative suite, in addition to this the course covered basic scripting for Multimedia, Web Development and Database Development (SQL, MS Access)

### **Victorian Certificate of Education: Year 12**

2000

Marcellin College

Bulleen, VIC

### **L1 Certificate in Modern Guitar (Honors): Modern Guitar**

1999

ANZCA

Australia