

PROFILE

- + Programmer
- + Unity 3D VR developer for
 - Education/simulation
 - Entertainment/games
 - Product promotion
 - Work safety and training

CONTACT INFO

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Location: Gold Coast, Australia

Extensive experience leading technical development, managing teams, mentoring, and establishing production workflow standards to deliver complex, high-profile interactive XR and media projects on time and within budget. After over a decade of software development, specializing in animation, video and 3D, I was hired for an XR development job in late 2014 and have been doing it almost exclusively since 2016.

KEY SKILLS

- Multi-platform software development (Windows, OS X, Android, iOS, Oculus)
- C#, C++, ANSI C, Lua and others as required
- Real-time 2D and 3D graphics, audio effects and spatial audio solution development
- Unity 3D game and simulation development for desktop, mobile and VR applications
- Unity 3D extensions
- Reusable software frameworks and development tools
- DevOps with custom automated build and testing pipelines.
- Cloud development with AWS (S3, DB etc.) and some Azure
- High performance network communications using TCP & UDP Sockets, REST etc
- Game development and gamification of educational material
- Documentation and technical writing
- Mentoring of junior developers
- Assisting as a communication bridge between tech and business
- Project management and coordination using SCM tech and tools (Git etc)
- Remote or onsite, solo or international teams

RECENT WORK

- Porting VR apps to Apple Vision Pro
- Working on commercial VR game (Quest version released March 2024)
- Designed and built Meta-funded [Quest](#) prototypes using new AR tech
- Designed and built runtime tech for ArchViz products
- Designed and developed *VApprentice* for Busy At Work, a VR work apprentice simulator
- Designed and developed [VRLearn](#), a VR safety training product
- Designed and developed Oculus Rift auto sim for Detroit 2015 Motor show
- Lead developer on STEM learning tools for [zSpace](#) holographic educational platform

That's it for the summary. A bit more verbosity in the next two pages.

WORK HISTORY

Toast Interactive: Gold Coast QLD November 2022 – November 2024

Role: Developer

Responsible for:

- Designed and developed prototype VR/AR prototypes showcasing new [Meta](#) AR tech
- Integrating new AR tech into the company's [flagship VR product](#)
- Converting existing IP (Quest, PSVR & PCVR) to Apple Vision Pro (visionOS)
- Assisting in adding new functionality and completing new [VR game](#)
- Overseeing development and build pipeline for [Gamescom pre-release version](#)

Real Serious Games: Brisbane QLD July 2022 – November 2022

Role: Developer

Responsible for:

- Overseeing updating of existing software infrastructure
- Creating a cloud licensing system for their XR training software

RCAD: Brisbane QLD February 2021 – June 2022

Role: Developer

Responsible for:

- R&D into new PropTech development
- Analysing and documenting legacy code
- Developing middleware for multiplayer functionality and analytics
- WebGL versions of real-time 3D applications (BabylonJS)
- Win64 tools for managing AWS database queries and reporting
- XR navigation functionality and live mode switching (XR, desktop)
- Desktop tools for model decimation (using Simplygon SDK)
- In-app tools for generating web 3D walk-through presentations

2020:

Worked on some side projects while spending most of the year sorting out complex family business issues (as Estate executor, director of various inter-connected companies and director of Trustee company).

BUSY At Work: Southport QLD October 2018 - end September 2019

Role: Developer

Responsible for:

- Application design and development of a series of VR educational games
- Creating basic artwork and animations with Blender
- Managing contract 3D artists and animators
- Managing art pipeline and custom components for biped animations and facial expressions
- Designed and built extensible framework for multi-themed VR games

Example [press info](#).

VRLearn/Panedia: Southport QLD January 2016 – August 2018

Role: Developer

Responsible for:

- Design and Development of VRLearn client applications and user experience (UI, navigation, interaction models). Product suite included VR app for Gear VR and Oculus Go (also available on Rift and Windows MR) and a companion mobile Android app for logging in, course management (supervisor, teacher and pupil modes), live statistics and remote control and synchronization for group training
- Using VRLearn to create VR safety training products for clients including Qantas, BodyCare and Gold Coast University Hospital, including integration with back-end Learning Management System for scoring, logging and VR user interaction statistics

4D Pipeline: Remote – (USA, Germany, France, UK, Singapore): February 2013 - January 2016

Role: Developer

Responsible for:

- Custom application development for interactive 3D, real-time ray-tracing software and VR experiences at a specialist 3D agency contracting to industry ISVs and design and marketing agencies on multiple projects, as either team lead or solo developer. Clients included Chevrolet, Dassault Systèmes ([Solidworks Visualize](#)), [zSpace](#), [Unity Technologies](#), Nemetschek ([ArchiCAD](#))
- Prototype configurator Unity editor extension (later released as [Unity Forma](#)).
- Interactive raytracer for ArchiCAD (using NVIDIA iRay)
- VR car simulator for Chevrolet (Detroit Motor Show 2015)
- [zSpace](#) educational STEM activities for US market

Other Roles

- **Knight Frank Price WaterhouseCoopers/DoFA, Canberra:** March 2000 – January 2002.
Developer of 3D UI, IPC (Java, JD Edwards), Oracle DB
- **Earlier:** Worked as a developer for various startups including web ISP control bar for Amicus (Mac, Windows, C++), in-house game development tool for Brilliant Digital Entertainment (C++, MFC, SQL), voice announcement system used by NSW State Rail for Open Access (ANSI C, UDP Sockets, Win NT), multimedia educational development system for Big Animated Digital (Director, C, Mac). Contractor for various repeat clients such as Australian Film, Television and Radio School (AFTRS), developing niche visualization and video editing tools
- **Prior to software development:** Owner/operator consumer audio importing, distribution and servicing business and was owner/operator of a digital audio post-production studio (based on the Fairlight MFX) in the Sydney CBD. Repeat clients included SBS Television (Australia)

Publications

- **Dr Dobbs Journal:** [Cross-platform video development](#) (C, Quicktime, Mac/Windows)
- **Dr Dobbs Journal:** [Cross-platform 3D graphics development](#) (C++, Apple RAVE 3D, Mac/Windows)
- **Dr Dobbs Journal:** [Netscape plug-in development](#) (C++, Mac/Windows)