



MAT CARPENTER

Freelance Senior Programmer (10+ years exp.)

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PORTFOLIO

White Label Services	<i>Various Studios</i>	(Various Platforms)
Game Engine	<i>Phantom Key</i>	(Windows · MacOS · Linux)
Uproar	<i>Lockwood Publishing</i>	(PS3)
Sodium Blimp	<i>Lockwood Publishing</i>	(PS3)
Auction Machine	<i>Lockwood Publishing</i>	(PS3)
Gift Machine	<i>Lockwood Publishing</i>	(PS3)
Sodium 2: Project Velocity	<i>Lockwood Publishing</i>	(PS3)
Sodium	<i>Outso</i>	(PS3)
Scorpion Stomp	<i>Outso</i>	(PS3)
Saucer Pop	<i>Outso</i>	(PS3)
Wii Self Defence	<i>Free Radical Design</i>	(Wii)
Star Wars: Battlefront III	<i>Free Radical Design</i>	(Windows · Xbox 360 · PS3 · Wii)
Newtopia	<i>Uni. of Southampton</i>	(Windows)

EXPERIENCE

Founder / Programmer · *Phantom Key* · (2013 – Present)

- Freelance software/consultation services.
- Singlehandedly built C++ game engine with asset hot reloading pipeline.
- Developed custom shaders, application logic and tools on in-house projects.

Programmer · *Lockwood Publishing* · (2010 – 2013)

- Lead Programmer on online shooter Uproar.
- Developed, released and maintained multiple console titles for client Sony.
- Wrote clean, robust and performant gameplay systems.

Programmer · *Outso* · (2009 – 2010)

- Built and maintained virtual world Sodium (2 million players).
- Developed 64-player online multiplayer with dynamic host migration.
- Wrote cloud saving, player metrics and online achievement systems.

Programmer · *Free Radical Design* · (2007 – 2009)

- Built million-line C++ codebase within 150-person team for client LucasArts.
- Developed Jedi/melee combat and boss battles on Star Wars: Battlefront III.
- Wrote, optimised and debugged code for PC and console.

SKILLS

Languages	C · C++ · C# · Java · GLSL
Scripting	Lua · Bash · Batch · Python · Ruby
Middleware & APIs	Unity · Unreal · Havok · OpenGL · OpenAL · ARToolkit
Environments	Visual Studio · Windows · MacOS · Linux · Console
Programming Roles	Gameplay · UI · Audio · Network · Tools · Engine · Graphics
Optimisation	CPU · GPU · Memory · Garbage Collection
Version Control	Perforce · Git · Mercurial · SVN
Project Management	Hansoft · JIRA · Trello · Basecamp
Web	HTML · CSS · JavaScript · PHP · JSON · XML

EDUCATION

BSc Computer Science · *University of Southampton* · (2004 – 2007)

- Studied computing theory and multiple languages/environments/paradigms.
- Developed augmented reality real-time physics simulator.
- Awarded first class grade for dissertation and accompanying software.

LANGUAGES

English	Native
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