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# Unity Game Development Essentials

Build fully functional, professional 3D games with realistic environments, sound, dynamic effects, and more!

Will Goldstone

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PUBLISHING

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BIRMINGHAM - MUMBAI

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# About the Author

**Will Goldstone** is an interactive designer and tutor based in the south west of England. Spending much of his time online, he focuses on web design and game development, specializing in online tutoring of many interactive disciplines.

Having discovered Unity in its first version, he has been working to promote its 'game development for everyone' ethic ever since and works with Unity to produce online games and games for the Apple-iPhone platform.

Will is reachable through his blog at [www.willgoldstone.com](http://www.willgoldstone.com), where you can find links to his various other online activities. He spends his free time on graphics designing, photography, writing loud music, and playing frisbee on the beach.

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I would like to thank my fantastic family and friends for supporting me during the production of this book—it wouldn't be here without you! Massive thanks also to the members of the Unity Technologies team and Unity IRC channel whose tireless patience got me started in Unity development back when; big thanks especially to Dan Blacker, Joachim Ante, Emil Johansen, Cliff Peters, Tom Higgins, Charles Hinshaw, Neil Carter, ToreTank, Mike Mac, Duckets, Joe Robins, Daniel Brauer, Dock, oPless, Thomas Lund, Digitalos and anyone else I've neglectfully forgotten. A massive cheers to all of you; you guys rock.

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# About the Reviewers

**Aaron Cross** is a freelance video game developer based in New Zealand. A successful musician and music producer, film-maker, and 3D artist, he switched his focus to game development in 2006. Since then he has produced three video game titles, and has provided art and programming solutions to Unity developers across the globe. He is based in Wellington, New Zealand.

In addition to commercial games, he has developed simulations for medical training, architectural visualization, science and research, conservation, and visual reconstructions for evidence used in court cases, using the Unity game engine.

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I would like to acknowledge the creators of this amazing program, this amazing tool that allows the ultimate digital experience in creative expression. I've done a lot of things in my life, but only when I found the gateway to real-time development through Unity did I finally realize that I could be really passionate and successful at the same time. My imagination has turned into a tangible reality with this tool, and it's become a foundation to my professional success. I can't thank you enough. I'd also like to thank my clients for being part of the fun! Many of you have become good friends over the code and polygons, late nights, and creative successes. And finally, I'd like to thank Gavin Hewitt, who taught me all the hard stuff, but also taught me how to love pencils and paper, and got me on good firm ground right from the start...

Enjoy your work my friends!

---

**Emil E. Johansen** is a freelance game development consultant living in Copenhagen, Denmark. Having worked professionally with engines, such as Renderware, CryEngine, and UnrealEngine 3, Emil joined the Unity community when going freelance and has been very active there by the alias AngryAnt.

In the Unity community, Emil has actively promoted and participated in the Wiki and IRC channels, while developing AI middleware solutions for Unity.

When not hooked up to the internet, Emil enjoys biking, sailing, and concert going. Online he can be found on the Unity forums, Wiki, and IRC channel as AngryAnt, on Twitter by the same name, and at AngryAnt.com.

**Clifford Peters** is 19 years old and has recently graduated from high school. A few years ago, Clifford decided to make his own web site. He learned about HTML and started to hand code his own web site. Later, he rewrote his web site after learning about XHTML and CSS. Later, after getting bored with making a web site, Clifford decided that he would instead make a computer game. He tried a bunch of different game engines but did not like using them very much. Clifford then found out about Unity, and after using it for a few weeks, he realized that he liked it because it was easy to use. He liked it so much that he went and bought it, and now he often spends hours a day programming with Unity and developing games.

**Jonathan Sykes** is a senior play researcher, skilled in the design and evaluation of the play experience. He is the director of eMotionLab, a premier research facility, which offers both consultancy and development services in the area of game production and play-testing. His particular research focus is the application of play technologies to serious endeavors, such as health, education, and business.

Both a psychologist and usability engineer, Jonathan's work is very much player-centered, and focused on the player experience. He has worked with Microsoft's Game User Research group to develop player-centered approaches to game design and evaluation and written academic papers and textbook chapters on the subject. He also works as a senior lecturer at Glasgow Caledonian University where he delivers undergraduate courses in player-centered game development.

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