

Biography of a software engineer
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John Carmack

John Carmack was born on August 20th, 1970 in Shawnee Mission, Kansas, a suburb of Kansas City. John bears the nickname, 'Carmack the Magnificent', which was bestowed upon him because of the ground-breaking advancements he made in the world of video game development. The son of Inga and Stan Carmack, John lived a self-proclaimed, "normal gifted-geek childhood". He partook in all the usual tropes associated with a tech obsessed adolescent such as building model rockets and playing the fantasy role playing game Dungeons and Dragons. Carmack became obsessed with computers during the personal computer revolution however, the school he attended could not afford them. This led to Carmack and a group of friends breaking into a school in a wealthier neighborhood in an attempt to steal an Apple Computer. They were ultimately caught and Carmack spent a year in a juvenile detention home.

Upon release, John continued pursuing his passion for computer programming. He would spend days upon days in his bedroom teaching himself how to write code. He graduated from Shawnee East Mission High School with a 4.0 grade point average and although he knew he was destined for greater things, John obliged his parents' wishes and attended the University of Missouri to study Computer Science. John lasted two semesters as a regular college student before dropping out to work as a freelance programmer developing his own software. He still needed to earn a living however, so he accepted a job at Softdisk, a software-publishing firm in Shreveport, Louisiana. It was here that he first met John Romero, Tom Hall and Adrian Carmack (no relation to John). Together, they created the first 'Commander Keen' game, 'Commander Keen 1: Marooned on Mars' which was freely distributed in 1990. The game was a big success and it inspired the group to leave Softdisk to start their own company, id Software, which was based in Madison, Wisconsin.

Between 1992 and 1993, id released both 'Wolfenstein 3-D' and 'Doom'. These games are widely regarded as games that pioneered the development of the emerging genre of the first-person shooter. The release of 'Doom' in particular, marks a turning point in the history of computer gaming for several reasons. Doom's realistic floor and ceiling texture added greatly to the sense of bodied movement that defined the first-person shooter genre. Carmack released portions of Doom's source code to the public which introduced the idea of customization into the ether of the gaming world. The practice of making source code available to players has been a key element in the

overwhelming popularity of Carmack's games. Aside from their pioneering graphic realism and online interactivity, Carmack's games have also been marketed and distributed in revolutionary ways. For example, 'Wolfenstein' and 'Doom' were both released in free downloadable shareware versions that contained only the first level. Then, once players had gotten a taste for the game, they could pay for the rest of it. This is a business model that is still widely being used today, most notably in games like Fortnite and Call of Duty: Warzone.

Doom was a monster commercial hit for id Software. It reached more than \$7 million in sales in 1994 alone. It eventually became one of the best-selling video games of all time and led to a Doom series. The success of Doom cemented Software id's reputation as the top game producer in the country. Carmack and Romero in particular became legends in their field for their innovative work. In 1996, id released Quake, which further advanced the genre. First-person shooters like Quake not only added to the surge of online gaming but also have encouraged the growth of the 3D-rendering sector of the computer hardware market. The 'Quake' engine itself has been licensed for use in numerous other games, most notably the hugely successful franchises; 'Call of Duty' and 'Half-Life'.

John Carmack's contribution in the gaming industry is historic, on March 22 2001, he became the fourth person to be inducted in to the Academy of Interactive Arts and Sciences, Hall of Fame, an honor bestowed upon those who have made revolutionary and innovative achievements in the video and computer game industry. The first person to receive that honor was Shigeru Miyamoto from Nintendo.

John's claim to fame is undoubtedly his innovative work in the world of 3d graphics, but John is also a well-known rocketry enthusiast. So much so, that in 2005 John privately funded a new venture called Armadillo Aerospace in the hope of making his lifelong dream of travelling to space a reality. Armadillo Aerospace was created with the lofty goal of paving the way for 'space tourism'. Unfortunately, in 2013 Carmack announced that Armadillo Aerospace had been put in to 'hibernation mode'

John Carmack is now largely focusing his efforts on innovation in the field of artificial intelligence. In 2013, John resigned from his position at id Software in order to become CTO for Oculus VR. Oculus VR is a producer of virtual reality gaming headsets and they are widely regarded as the industry leader. A branch of Facebook, Oculus has pioneered the Artificial Intelligence gaming world and John's work as the spearhead of the company was a large reason for that. In 2019 however, John stepped down as CTO of Oculus and now works as a 'consulting CTO'. He stated that his reason for stepping down

was so that he could focus more of his time to work on artificial general intelligence.

John Carmack has had a substantial effect on the world through his work as a software engineer. An early adopter of computer programming, his work in the gaming industry and in the field of 3D graphics has left a lasting impact and his work will be sure to influence generations of software engineers for years to come. John still has a lot to offer in the world of software engineering and I am sure that we will see the effect of his work in the world of Artificial Intelligence in the foreseeable future.

Bibliography

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