

Biography of an Influential Software Engineer

Linus Torvalds

Introduction

Linus Torvalds, born 28th December 1969 in Helsinki is considered by many to be one of the most influential software engineers of all time. He is one of the most successful software developers and entrepreneurs the world has ever seen.



Early life

Linus was born to radical right-wing parents, Nils and Anna Torvalds. They both worked as journalists in Helsinki. He was named after Nobel-Prize winning chemist, Linus Pauling. From the age of 11, Linus showed an interest in learning to program. His first programming language was BASIC. His maternal grandfather was a professor of statistics at the University of Helsinki, and played a significant role in influencing the early stages of Linus' career. He attended the University of Helsinki and graduated with a Master's degree in Computer Science in 1998. This is where he first started programming in C, the language which we would use to write the Linux kernel. He spent some time in the military too, reaching the rank of Second Lieutenant as a Ballistic Calculation Officer.

Linux



While at University, Linus bought his own computer. It had an Intel 386 processor, 4MB memory and was IBM compatible. This was a very impressive machine for its time. Torvalds was, however, very unhappy with the Microsoft operating system. He much preferred the Unix system he had become accustomed to in college. At the time the cheapest Unix system would have set him back roughly \$5000. This is why he decided to develop his own operating system and call it Linux(a combination of his first name and Unix).

He worked tirelessly on Linux and released the first version in 1991. The initial version consisted of just 10239 lines of code. The Linux kernel is the most significant free, open source software around to this day. A kernel is a computer program with complete control over everything in its system. It controls access to the CPU, memory etc. He uploaded the source code of Linux to a public network with a General Public License, allowing anyone to study, use, modify and extend it. This brought together a community of software engineers, all working to improve upon each other's work. Linux is seen as the biggest collaborative software project in history.

Today, Linux is used in almost all forms of computing. It never became very prominent in household computers though. Many of the biggest companies in the world such as Facebook, Google and Amazon all run their computers through Linux. All 500 of the top supercomputers in the world were using Linux as of November 2017. It is not just used on supercomputers though. It has risen to prominence in the mobile phone industry recently though. There has been a huge spike in usage in the last ten years due to its use in the Android Operating System which is used worldwide on mobile phones and tablets. The Linux Android system is installed on over a billion devices today!

Git



While most people know him for creating Linux, another of Linus' inventions has seen tremendous recent success. Git is a version-control system for tracking changes in computer files and to help coordinate work between multiple people on the files. Torvalds created Git in 2005 as a tool to aid the development of the Linux Kernel. Git, like Linux, is open-source and free to use. Git is the world's most popular code management tool and, in 2015, it was said that 69.3% of all software developers were using it. Git is renowned for its simple design and its strong support and branching system for non-linear development. Git's ease of use and ensures its continued growth in terms of both contributors and viewership to this day.

Impact

With either Linux or Git, Torvalds has influenced nearly every developer in the world over the last 20/30 years. Linux is used daily on billions of devices worldwide. Most of us use it every day without even noticing, on websites such as Facebook and Google.

Today, all software engineers are judged by their GitHub(a website for using Git) profiles, by potential employers and fellow developers alike. It has also opened the door to collaboration on development projects across different parts of the world.

He has recognised as one of Time Magazine's 100 Most Influential People of the Century at 17th. He was also inducted into the Internet Hall of Fame alongside other famous names such as Tim Berners-Lee. Still a few months shy of his 50th birthday, Torvalds has changed the world of software development permanently, and surely has another trick up his sleeve yet.

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