

Linus Torvalds

Early life

Born on the 28th of December 1969, Linus Torvalds is a software engineer who revolutionized the computer industry. From Helsinki, Finland he started to write programmes at the early age of 10. His grandfather Leo Toernqvist (a professor of statistics in the University of Helsinki) was the greatest influence in Torvalds life. Toernqvist bought one of the first personal computers and on it Torvalds started using BASIC programming language to begin to write programmes. Torvalds quickly realised his passion for computer programming and followed his passion by attending the University of Helsinki in 1988, where he studied computer science. However, in 1989 his education was interrupted as it was compulsory for citizens of Finland to do military service. Torvalds joined the Finnish army for 11 months to complete an officer training program. While in the army held the position of second lieutenant. He returned to college in 1990 and went on to complete a master's degree and his final thesis was named 'Linux: A Portable Operating System'.



Linux

Linux

Torvalds began work on Linux kernel when he was still in college and its success was said to be a longshot. However, it is now one of the most important pieces of operating software in the world and it is the invisible force behind so many applications. It is used by millions of users on a

daily basis and its importance and impact is not to be underestimated.

Torvalds original goal was to improve UNIX on his Intel 386 CPU which cost him \$3,500. Unix was good but it was very expensive and he wanted to create a free open source alternative operating system to the big players in the industry such as Apple and Microsoft. In 1991 when Linux was first released it changed computer programming forever.

By installing 16 floppy discs to the computer, he comprised the Minix operating system. Minix was a version of Unix that Torvalds thought was inefficient and he was positive he could improve it. He then started to read manuals and write pieces of code that would improve Minix. At this time his preferred programming language was C and that is what he wrote the code for kernel in.

What has made Torvalds work so successful was the ability to share code and ideas and let others contribute.

'Hello everybody out there using minix - I'm doing a (free) operating system (just a hobby, won't be big and professional like gnu) for 386(486) AT clones... I'd like to know what

features most people would want. Any suggestions are welcome, but I won't promise I'll implement them :-)'.

Torvalds released this message on his own operating system in 1991 and it is now recognised amongst programmers worldwide.

This message started a revolution and since its origin it is estimated that around 8000 people have contributed to kernel. The fact that it was basically error free and people could personally modify it suit their own needs contributed to its wide success and is one of the main reasons why it was preferred to the likes of Microsoft.

The reason that kernel worked when others failed is due to many factors. GNU, the licence for Unix made their software private, which kept the best technology for themselves. However, Linux's licence stated that anyone who made changes had to share them, making sure the project never split apart and the best version of Linux was used by everybody. Nonetheless the real genius behind kernel was Torvalds. He effectively became the figure head for open source transformation.

Money was never a motive for Linus Torvalds although he currently has an approximate net worth of \$150 million. He created Linux kernel because of his passion and knowledge of software engineering and devoted countless hours to it making it such a huge success. What is amazing is it is the bases of so many revolutionary companies such as Google, Red hat and Facebook. Due to the availability of this software, they, along with others were able to start cheaply yet have turned into multimillion dollar enterprises today and they have the work of Torvalds to thank! Red hat for example was bought by IBM on the 28th of October this year for \$34 billion. Today the majority of websites and android smartphones run on Linux kernel highlighting how Linux permeates our day to day lives.

The genius of Torvalds is not in the programming, the genius is in how kernel was engineered. In fact, Torvalds has only contributed about 2% of the code in kernel and even so he does not claim to have written all of this code himself, it is



actually said that Torvalds is a low level programmer! What he achieved through Linux has been extraordinary and the world would be a different place today if it wasn't for Linus Torvalds creating Linux kernel.

Git

When Linux kernel all started, Torvalds used a Usenet group where contributors to the code would post there patches to this group and then onto a mailing system. He then added them to his own source tree. This was a tedious process and in 2002 he chose to switch to Bit Keeper. This was a closed sourced system and it wasn't a popular move amongst kernel users. Linus's fall out with Bit Keeper was due to them managing the source code of Linux and because it would not be free of charge. For Torvalds this was the reason that prompted his idea to make a new system.

In 2005 Git was created and it was used for the source code management for kernel. It was exactly what was needed for kernel to move forward, open source and free. Amazingly, Torvalds only spent around 10 days writing code for Git before it was up and running and the first commit was pushed.

Git is used today for thousands of projects and has made coding much easier for both large and small groups. Torvalds prides Git's success on its ability to make tasks that seemed hard and painstakingly slow such as merging, now be able to be completed in a matter of seconds. Basically, Git was made by Torvalds for Torvalds and this is why other software engineers and computer programmers find it so useful.

Awards and Recognition

Torvalds was recognised for his contribution to computer programming as he placed 17th on the Time magazines poll of 'Time 100: The Most Important People of the Century' solely due to Linux kernel. Time also voted him one of the most influential people in the world in 2004.

Git has also become the largest collection of open source software in the world and it continues to grow.

Personal Life

Currently Linus Torvalds is now living in Portland, Oregon with his wife and three daughters and in September 2018 he took his first break from working on Linux kernel in almost 30 years!

References

I consulted the following websites to build my biography

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