Figure 1: https://pixls.us/articles/faces-of-open-source/Linus_Torvalds_by_Peter_Adams_w640.jpg

BIOGRAPHY OF LINUS TORVALDS

AN INFLUENTIAL SOFTWARE ENGINEER

ABSTRACT

This is a short biography of Software Engineer and an influential Linus Torvalds.

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Linus Benedict Torvalds is a software engineer and a computer scientist who developed numerous software (Git, Subsurface, etc.) which impacted millions of people around the world. He is the main author and the inventor of the famous Unix-like operating system called Linux Kernel.

Early Life

Linus was born on 28th December 1969 in Helsinki, Finland. He grew up in a very educated family, both of his parents Anna Torvalds and Nils Torvalds were journalists and his father Nils was also a member of the Communist Party of Finland. His grandfather Ole Torvalds was the Finnish-Swedish journalist and poet.

From an early age he found subjects like Maths and Physics very interesting. He started programming at the age of eleven when his maternal grandfather Leo Törnqvist, who was a professor pf statics, bought a Commodore VIC-20. This was Linus's very first computer and he started helping his grandfather by typing BASIC programs into the machine. Leo's objective was to get Linus interested in maths. After a while he started entering his own programs. Linus started saving up for an upgrade from a VIC-20 to a Motorola 6800 which he managed to get. From his early years he was very interested in operating systems and machine level programming.

He was accepted into the University of Helsinki in 1988 and completed his first year. After the first year of his degree Linus joined the Finnish Army "Uusimaa brigade" for 11 months which is the mandatory military service of Finland and he held the rank of Second Lieutenant by the role of artillery observer. After he finished his training, he resumed his studies at Helsinki University. There he got exposed to UNIX for the first time and later his thesis was titled "Linus: A Portable Operating System". In 1996 he graduated with a master's degree in computer science as a member of NODES research group.

Birth of Linux

Soon after returning from his military training he bought Professor Andrew Tanenbaum's book "Operating System: Design and Implementation". After reading the book by Andrew Tanenbaum Linus became fascinated by the philosophy of Unix. Linus wanted to develop his very own operating system which he couldn't do on his current PC, so he had to save up for a better machine.

On 5th January 1991 he bought Intel 80386 with 4 megabytes of RAM which was IBM PC clone. He soon developed a terminal emulation program with which he could dial the university modem and read the news. Linus started to write program without any operating system so he could learn the low-level capabilities of his machine. Linus fully understood his machine when he got multiple programmes working and displaying outputs on the screen. He started reading emails from the university's computer by getting his program to communicate with to the modem. He realised that his terminal emulator was more than just displaying text when he developed a system which also allowed him to upload and download files.

Later, he decided to turn the focus of this project into creating an operating system, but he couldn't acquire the POSIX standards, which is a system call for Unix-like operating systems. He was faced with the challenge of implementing his system based on the manuals for the Sun variant of Unix, running on his university server, but they didn't mention how to implement the system calls needed for the kernel to run the programs. After getting the POSIX implemented, one of the teaching assistants from his university offered him a subdirectory on an FTP server to make the OS available for download. After a few months of work his OS was finally released. Originally Linus wanted to name the OS "Freax", a combination of "free", "freak" and "x" but later went with the name "Linux".

As Linux grew in popularity, Linus started receiving requests from all around the world asking him to share the OS freely. Soon he decided to re-license his work under GNU, a General Public License. Since Linux is opened source, there are over one

thousand companies with tens of thousands of developers. The initial version of Linux had around 10,000 lines of code and now, it has over 26 million. Nowadays Linux is mostly used in Android devices, desktop computers and some supercomputers.

Other Projects

On 3rd April 2005 he started developing Version control when he was criticized for his use and suspected support of the proprietary BitKeeper software for version control in the Linux kernel. He decided to make his own version control system and replace BitKeeper and named it Git which means "unpleased person" in British slang. Nowadays, Git is the most used version control system.

In 2011, when he took time off from kernel development to work on other projects, he saw that there was a lack of decent divelog software on Linux, so he decided to develop his own software and named it Subsurface. It's also available in Windows and Mac.

It's safe to say that Linus is very successful in the field of software engineering and his works are a perfect example of that.

References

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