Biography of Linus Torvalds (Jack Keenan – 18324599)

On December 18th 1969 Linus Benedict Torvalds was born into a talented family in Helsinki, Finland. Both Torvalds parents were journalists and he is the grandson of statistician Leo Tornqvist and poet Ole Torvalds. His father Nils Torvalds is currently a Finnish politician and member of the European Parliament believed to be a likely candidate in future presidential elections. Named after Linus Pauling a Nobel-Prize winning American Chemist, Linus Torvalds is best known for being the creator of Linux kernel and the distributed version control system Git.

At the age of 10, Torvalds love of computers began when he started to play around with his grandfather's commodore VIC-20 writing programs in BASIC. In 1988 he went on to study Computer Science in the University of Helsinki graduating in 1996 with a master's degree. After his first year in college Torvalds was forced to complete his compulsory military training for the Finnish Army where he held the position of second lieutenant before returning to University 11 months later. While studying Linus purchased his own personal computer which he was not pleased with. He compared its MS-DOS operating system to that of the UNIX operating system that he had been using on the university computers. At this point Torvalds creative and ambitious side began to shine when he decided he would create and build a PC version of UNIX. After working on this project for a few months Linus released a notification on the internet to alert other software developers that his new system known as Linux kernel was available to be downloaded for free. Not only did he make the system free for downloading but he also released the source code so that users could modify the system to their own personal preferences. Releasing the source code proved

to be an advantageous move as other programmers helped Torvalds retool and refine the software.

In 1994, Linux kernel version 1.0 was released which was around the same time as Richard Stallman and the FSF had been attempting to create a system called GNU which was an open source UNIX like operating system. Stallman had a different approach to Torvalds by creating the utilities for the UNIX operating system first. This was a huge bonus for Linux kernel as it meant these utilities could be added to create a complete system called GNU/Linux or just Linux.

Through the 90s Linux continued to grow thanks to the efforts of hobbyist developers. Despite Linux not being as user friendly as the popular operating systems such as Mac OS and Windows it is efficient, reliable and has developed a good name for being an operating system that seldom crashes. The open source nature of Linux allowing it to be modified vastly increased its popularity. Linux is used by many of the top companies around the world such as Google, Facebook and IBM. Torvalds nonprofit agenda by making Linux open sourced in order for it to be improved and personalized has earned him the title of being one of the godfathers of open source development. In 1999, Red Hat and VA Linux who were both leading developers in Linux based software offered Torvalds stock option as a thank you for his creation. Subsequently that year both companies went public and the value of his shares shot up to around $20million.

In 1997 Torvalds and his family moved to California to join a start-up company called Transmeta but later he left the company to solely concentrate on growing Linux through nonprofit ventures highlighting his dedication to improving computing for the greater good and not for financial gain. In 1999 he was names by MIT technology review as one of the worlds top 100 innovators under 30 showing the worlds appreciation for the work he was doing.

Torvalds is an advocate of open source describing it as being the only right way to do software, however he has also said that he uses the tool that's best for the task at hand. In 2002 Torvalds began

using BitKeeper which is proprietary revision control system to maintain the source code for the Linux kernel. This backfired as Linux supporters wanted to maintain the completely free software Linux was previously providing in everything they did. This resulted in Andrew Tridgell breaking the BitKeeper protocol by writing a tool to access Bitkeeper which caused a lot of trouble and ultimately lead to Torvalds boycotting BitKeeper. However he did not want to go back to the "bad oul pre-BK days" and there was nothing out there that met his performance requirements alongside the fact that he was worried about code integrity and the workflow as a whole so in 2005 he decided to write his own version control system which he subsequently called Git. The goals of Git were to be fast, have a simple design, have a strong support for nonlinear development and to be able to handle large projects such as Linux. Git is now the most widely used version control system in the world relied on both by commercial developers and open source developers proving to be another aspect of computing that Torvalds changed for the better.

In 2012 Torvalds won the Millennium technology prize which is said to be technologies equivalent of the Nobel Prize. Additionally, that year he was inducted into the internet hall of fame for the work has done with Linux. Some other awards Linus has achieved are the IEEE Computer Pioneer award in 2014 and IEEE Masaru ibuka Consumer Electronics Award in 2018. The awards Linus has won highlight the appreciation the world has for his hard work and innovation. Despite his vast number of achievements Linus is known to be quite harsh and has called himself a "really unpleasant person". Most notably he called his own lawyer a "nasty festering disease" and was pictured giving Nvidia the middle finger. Linus has said he would like to be a nicer person and swear less but it's just not who he is.

Outside of his career Linus married Tove Torvalds who is a national karate champion. Strangely enough Tove was a student of Linus in a computer laboratory he was running, their relationship kicked off by Tove emailing Linus asking for a date. The pair went on to have three daughters. In the early 2000s Linus developed an

interest in scuba diving which resulted in him developing the subsurface project which is a piece of software for logging and planning scuba dives. In 2010 Linus became United states Citizen and register to vote. However, he has said he has no affiliations with any political party as he has too much personal pride to be associated with any of them.

Overall it is very clear that Linus Torvalds is an exceptional software engineer who has contributed immensely to the technologies we use every day. He is also an incredibly inspiring individual as his tendency and drive to solve problems he is facing is truly motivating. Even though he had no interest in version control he built Git because he had issues with BitBucket, and this is testament to his hard work and positive attitude towards problem solving. His nonprofit agenda is also admirable and has resulted in the industry developing much more than if Linus wasn't an advocate of open source development as Linux was allowed grow by the vast amount of people contributing to it.

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