Name: Cian McGovern Leahy. Student no: 17329433

Biography of Linus Torvalds

Linus Toravalds is the creator and principle developer of the Linux Kernel, the kernel for the linux operating systems and other operating systems such as Android and Chrome OS. He also created Git. I have followed him for several years now and I am impressed with his ability to create value and innovate new technology seemingly all on his own.

He almost single handidly wrote the entire linux operating system from scractch which is now in millions of computers It would not be a stretch to say that the internet would be a much less vibrant and interesting place without Linux. 96.3% of the top 1 million web servers are running Linux with Windows at just 1.9%.

Torvalds received the Millenium Technology Prize in 2012 "in recognition of his creation of a new open source operating system for computers leading to the widely used Linux kernel." He is also the recipient of the 2014 IEEE Computer Society Computer Pioneer Award and the 2018 IEEE Masaru Ibuka Consumer Electronics Award.

Torvalds was born in Finland on December 28th 1969 and received a masters in computer science from the NODES research group. He attended the army for while and wrote his masters thesis: ”Linux: A Portable Operating System”. He started programming in BASIC at the age of 11. He purchased a Sinclair QL and modified its operating system by writing his own assembler and editor as well as writing a Pacman clone.

This seems to be a common trend amongst many successful software engineers. They have a strong passion for software from an early age and are encapsulated with what they can create with it. The fact that it is often a well-paid profession does not even register for them as the complexity and power of the device that they are modifying is enough to propel them to write thousands or even millions of lines of code. Elon Musk, Mark Zucherberg and Bill Gates are a few other names that spring to mind in this regard.

In 1991 he purchased an Intel 80386-based clone of IBM PC before receiving his MINIX copy, which in turn enabled him to begin work on Linux. The first prototypes were released later that year and the version 1.0 was released in 1994. Torvalds is currentyl sponsored by the Linux foundation and works full time on improving Linux. “The big point for me was not when it was becoming huge it was when it was becoming little. The big point for me was not being alone and having ten maybe one hundred people involved. That was the big point” – Torvalds on his Ted Talk. Although Torvalds started the project alone there were soon many different contributors who all contributed to an open source Kernel allowing rapid development and bug fixes which privately developed operating systems had difficulty matching which allowed Linux to become a dominant operating system.

Torvalds was also the main developer of the Distributed Version Control System Git. This was developed by him when Linux began to have many different people involved in each release of Linux. Git was created to help maintain Linux and enable Torvalds to coordinate his work with thousands of other people across the world. “Both Linux and Git arose as an unintended consequence of your desire not to have to work with too many people” – interviewer with Linus Torvalds on his Ted Talk. A statement which he eagerly agreed with which I found quite amusing.

Torvalds also comments that he was interested not in selling linux but in making it a project that everyone could contribute to. This is not something I think I would be able to do. I would try to monetise my work as soon as possible.

Torvalds has described himself as “a really unpleasant person” and has made personal attacks to other developers when he does not agree with them or their processes. This does not surprise me in the least as when someone is extremely passionate about something to the point that it is all consuming for them then they likely see the world in a very different way and think about their work on a much deeper level than the average developer does. Many of the same entrepeneurs and software engineers that I listed above are also known to be hard cases when it comes to their work. Notable Elon Musk, Steve Jobs and Bill Gates.

It was quite comical to me watching Torvalds Ted Talk when they talked about the “Linux World Quarters”. It was a picture of Torvalds standing at his computer desk with a lamp and a modem by his side. This made me think back to the the concept of 10x ers. People who get 10 times more done than the average developer and are capable of doing so because they are constantly updating their skills and have a burning passion for what they do which leaks out of them. Steve Jobs even talks about 100x or 1000x’ers which it’s probably safe to say Torvalds falls into.

Although Torvalds began by writing the operating system by himself in 1991, he stated in 2006 that only 2% of the Linux Kernel was written by him. Due to the fact that thousands of people had contributed to the Linux Kernel this still makes him one of the larget contributers however he stated in 2012 that his own personal contributions are now mostly merging code written by others. Torvalds still retains the highest authority to decide which code is incorporated into the standard Linux Kernel. Linux had over 900,000 new activations every day in the mobile operating space according to Googles 2012 reports and is becoming a dominant operating system in many spaces except for the desktop computers which it has lagged behind in.

Linus is married to Tove Torvalds and has three daughters. He is atheist and and is a US citizen. He developed an interest in the early 2000’s in scuba diving and went on to achieve several certifications in that field which later led him to develop the Subsurface project which is a piece of software for logging and planning scuba dives. It allows scuba divers to keep track of their dive data

“The thing that I really enjoy about programming is you can really tell the computer what to do and it will do what you tell it and nothing more” – Linus Torvalds. It does seem to be a common theme for many of these superstar programmers that they want total control over their outcomes and are somewhat risk averse in life. The real world is often complicated and cannot be planned for exactly. People are fickle by their nature. They change their minds and don’t think things through as they should. They make poor decision all the time often repeatedly without making connections between the negative consequences that they reveive and their actions. Perhaps this desire for total control and single-minded ambition to get their way is a necessary attribute for a 10x developer.

Torvalds has been working on the Linux project for 25 years showing a commitment that is almost unparalleled in the software industry. I could not see myself working on something for such a long time but I can appreciate the passion that would drive someone to do so. Torvalds also commented in a video in 2019 that his model of development for Linux had not changed in over 10 years and that new releases were made every two to three months. He also briefly mentioned that a mailing list is used to coordinate developers and their work and that there is open infrastructure available for doing testing and validation amongs the thousands of the developers that have made contributiosn to the project. I cannot imagine working a such a large project with so many different developers I think it would be quite a confusing process but certainly an interesting challenge to tackle as well.

A self admitted personal failure of Torvald is that although Linux was started as a desktop operating system that is the only area where Linux has not completely taken over.