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7 unsung heroes of technology

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By Shefali Deshpande

Steve Jobs, Bill Gates, Tim Cook, Meg Whitman, our very own Satya Nadella. All these names sound familiar, don't they? They are not just famous personalities. They are creators, inventors, revolutionaries and visionaries with strong business acumen. Their names are synonymous with the brands and products they have created or helped sustain, without which most the twenty first century would probably be unimaginable.

However, have you ever wondered about the names that you perhaps never heard of? The names that have changed your lives in one way or another. The unsung heroes, who perhaps by no fault of their own, have their names on the last pages of history textbooks, or not there at all?

If you have, this is the story you need to read. Here are a few people whose contributions have perhaps shaped our lives in more ways that we can imagine, and even allowed our technology gurus and innovators to be who they are today. These are people who laid the founding stones upon which today's technological empires have been built.

1. Ada Lovelace

Ada Lovelace was unique, in that she developed an algorithm for a computer that didn't yet exist — an accomplishment that some say qualifies her to be called as the world's first computer programmer.

Born to English nobility in 1815, Lovelace was made to work by Charles Babbage in 1843, documenting his otherworldly (at that time) idea of what could be known as a 'computer,' - The Analytical Engine. Starting with a document written in French by Luigi Menabrea, an Italian mathematician, Lovelace added extensive notes to the English translation, including the world's first computer algorithm. The Analytical Engine was intended to count Bernoulli numbers, but Babbage was unsuccessful in getting funding for an idea that seemed ludicrous at the time. But Lovelace saw deep potential, recognizing the capacity of a machine like that.

"Many persons who are not conversant with mathematical studies imagine that because the business of Babbage's Analytical Engine is to give its results in numerical notation, the nature of its processes must consequently be arithmetical and numerical, rather than algebraic and analytical. This is an error. The engine can arrange and combine its numerical quantities exactly as if they were letters or any other general symbols; and in fact it might bring out its results in algebraic notation, were provisions made accordingly," Lovelace wrote in the Sketch of the Analytical Engine Invented by Charles Babbage

Ada Lovelace died at the age of 36 in 1852 because of uterine cancer and for many years, her work was not only ignored but thought to be of no substance. Today, she is celebrated each year on Ada Lovelace Day, a practice that only began many years after her death. She never received her due recognition while she was alive. Four generations and many technological revolutions later, her descendant, Honora Smith is now aspiring to make her own mark in the world of mathematics and computer science.

2. Hedy Lamarr

Largely known as a screen star of the 1920s, Hedy Lamarr proved to be more than just a pretty face. She played a key role in the invention of spread-spectrum technology; specifically, by conceptualizing the idea of frequency hopping, which itself is a method of sending radio signals from different frequency channels.

Lamarr, along with co-inventor George Antheil, created the technology that was originally intended to help the Navy control torpedoes. However, little did they or the world know that this small scale innocent work of the two would lead to the creation of the basis upon which present day wireless technologies such as Bluetooth, Wi-Fi and Code Division Multiple Access (CDMA) would function.

The two received a patent for their idea on August 11, 1942, according to the American Heritage of Invention & Technology. But despite lobbying and fundraising efforts on their part, the Navy ultimately passed on the technology.

This only goes to show how ahead of their time the two were with their ideas and work.

But all was not lost. It was reborn in the late 1950's when engineers at Sylvania Electronics Systems Division recognized the potential behind the gold mine the world was sitting on. And it was then that their work was used to secure military communications.

After initially receiving very little recognition for her work on spread-spectrum technology, Lamarr was honored with a special award: the Pioneer Award by the Electronic Frontier Foundation in 1997. This long overdue recognition for her scientific endeavors came just three years before her death in 2000.

3. Alan Turing

Alan Mathison Turing (23 June 1912 - 7 June 1954) was a pioneering English computer scientist, mathematician, logician, cryptanalyst and theoretical biologist. He was highly influential in the development of theoretical computer science, providing a formalization of the concepts of algorithms and computation with the Turing machine, which can be considered a model of a general purpose computer. Turing is considered to be the father of theoretical computer science and artificial intelligence.

He came up with many techniques for breaking German ciphers. Turing played a pivotal role in cracking intercepted coded messages that enabled allies to defeat the Nazis in many crucial times, saving uncountable lives and reducing the war time in Europe by an estimated four years.

Turing was the tortured and wronged genius behind the decoding the Enigma machine and the development of computing. From the iPad to Facebook, much of the technology we use today was coded, created and worked on by him.

Turing was prosecuted in 1952 for homosexual acts, when such behavior was still a criminal act in the UK. He accepted treatment with DES (chemical castration) as an alternative to prison. Turing died in 1954, 16 days before his 42nd birthday. A post-mortem examination established that the cause of death was cyanide poisoning. When his body was discovered, an apple lay half-eaten beside his bed, and although the apple was not tested for cyanide, it was speculated that this was the means by which the fatal dose was consumed.

Some even believe that the tech giant Apple got its name and logo as an inspiration from Turing's end.

The historical 2014 drama film, 'The Imitation Game,' starring Benedict Cumberbatch as Alan Turing was a huge success.

Queen Elizabeth II granted him a posthumous pardon in 2013, almost 6 decades after his unjust treatment and death.

4. Barbara Liskov

Born November 7, 1939 as Barbara Jane Huberman, Barbara Liskov is an American computer scientist who is an institute professor at the Massachusetts Institute of Technology and Ford Professor of Engineering in its school of engineering's electrical engineering and computer science department. As one of the first women to earn a Ph.D. in computer science, Barbara Liskov has always been an IT trailblazer

Liskov has several notable achievements to her name, including the invention of CLU, a programming language that helped lay the foundation of object-oriented programming; Argus, a programming language (largely an extension of CLU), that supports distributed programs; and Thor, an object-oriented database system.

These advances in object-oriented programming have contributed to the wealth of many modern OOP-based languages and operating systems, including Mac OS X, Objective-C, Visual Basic.NET and Java. Computers as we know them would not be able to coherently integrate language use without this woman.

At 76 years of age, Professor Liskov continues her research at the Massachusetts Institute of Technology. In 2008, she was honored with the A.M. Turing Award, an annual recognition given by the Association for Computing Machinery that many consider to be 'the Nobel Prize of computing'. In 2012, she was inducted into the National Inventors Hall of Fame for her contributions to programming languages and system design.

5. Anthony Michael "Tony" Fadell

Born March 22, 1969, Tony Fadell is a Lebanese-American inventor, designer, entrepreneur and angel investor. He served as the senior vice president of the iPod Division at Apple Inc., from March 2006 to November 2008, and is known as 'one of the fathers of the iPod' for his work on the first generations of Apple's popular music player. In May 2010, he founded Nest Labs, which announced its first product - the Nest Learning Thermostat, in October 2011. Nest was acquired by Google in January 2014 for $3.2 billion. Since early 2015, he has been leading the Google Glass.

Tony created both the concept and the initial design of the world famous iPod. Starting as a lowly contractor, Fadell's work on the project eventually found him in a senior vice president position, with a host of popular devices to his name and his work reaching more than 350 million people.

Although he does not work with Apple any more, he was never truly given the credit for the revolutionary way in which he has affected tech and music industries. At one point, when the American auto industry had almost collapsed, he also revealed that he and Steve Jobs once discussed an Apple car. Fadell pointed out that phones and cars aren't that different: 'A car has batteries; it has a computer; it has a motor; and it has mechanical structure,' he was quoted as saying.

'If you look at an iPhone, it has all the same things. It even has a motor in it.

6. Ajay Bhatt

This list would be severely incomplete without acknowledging the man of our own soil, who created the ubiquitous standard widely known as the USB. Yes, the standard without which our smartphones won't charge, data won't transfer, and a lot of gadgets just won't work. The USB port (and largely, the standard) is a commonplace device on video game consoles and smartphones alike, and has even replaced many old technologies such as charging devices and portable chargers. Bhatt is an Indian-American computer architect who helped define and develop several widely used technologies, including USB (Universal

Serial Bus), AGP (Accelerated Graphics Port), PCI Express, Platform Power management architecture and various chipset improvements.

Ajay Bhatt rose to global celebrity status as the co-inventor of USB through an Intel 2009 TV advertisement, where he was portrayed by actor Sunil Narkar. After having spent his formative and youthful years in India and upon completing his graduation in Vadodara, India, Bhatt completed his master's degree in New York and joined Intel in 1990. He currently holds 31 US patents.

7. Shiva Ayyadurai

Facebook, Twitter, YouTube, even Tumblr. So what exactly is it that these platforms have in common, except for trying to outdo each other in terms of market value and working together for symbiotic growth and prominence? What they have in common is the last genius on our list.

Without Shiva Ayyadurai's creation, neither of the above websites would be able to properly function.

The Email. They all need require an email address to sign up and log in, the first step to being a part of the online world on any of these platforms. Not just that, we all use email for just about everything, professional and personal communication included. It is one such creation that almost single- handedly made the ancient art and requirement of letter writing nearly obsolete in a record time of less than a decade.

Shiva Ayyadurai is the man behind the creation of the email. It is worth a mention that Ayyadurai missed on the fame for some reason, even though he was just a 14 year old teenager when he invented email in 1978. He developed a full-scale emulation of the interoffice mail system, which he called 'EMAIL' and copyrighted in 1982. The name's resemblance to the generic term 'email' and the claims he later made for the program have led to controversy over Ayyadurai's place in the history of computer technology.