**Satoshi Nakamoto**

**Introduction**

I decided to choose Satoshi Nakamoto as my software engineer as I have had a huge interest in cryptocurrencies over the past few years and I have an avid interest in blockchain technology and the potential capabilities of it in day to day usage. Nakamoto is probably the most well-known cryptographer due to the fact that he was one of the first people to create a cryptocurrencies that actually worked and lasted

**Who is Nakamoto**

Satoshi Nakamoto is the pseudonym given to the person/group associated with creating the cryptocurrency bitcoin. The individual/group remains anonymous while there has been many claims as to who he may be. Nakamoto also created the first blockchain database. Bitcoin was first mentioned in November 2008 with Nakamoto publishing a paper describing the digital currency. The first software for bitcoin was then released in January 2009. It is claimed that Nakamoto started writing the code for it in 2007. I Nakamoto is claimed to be a 37 year old male who lives in Japan but there is many doubts around this. The first doubt is due to the fact that most of his work is carried out in a time zone equivalent to working from a time zone close to GMT. Japan is (GMT + 9) which unless Nakamoto was a freak insomniac proves almost impossible to him being from Japan. He also documented his work in English as opposed to Japanese. The only real plausible way for Nakamoto to be from Japan would be if it wasn’t just one person, instead Nakamoto was the main person in a team with some of the team working from Europe or America. Although it is strongly unlikely that it was a team, it is thought that it is much more likely to be just one person. Although everyone wants to know who Satoshi is it actually doesn’t make a difference who he is. Bitcoin is completely decentralised meaning it doesn’t need Satoshi for it to continue. The source code for Bitcoin is even able to be viewed on GitHub. It is estimated that only 20% of the original source code remains. It is believed that at bitcoins highest value in December of 2017 Satoshi could have had €17 billion worth of bitcoin making him the 45th richest person in the world at that time.

<https://theweek.com/articles/561540/misidentification-satoshi-nakamoto>

<https://fortune.com/2015/12/09/bitcoin-satoshi-identity/>

**How bitcoin works**

As mentioned above, bitcoin is completely decentralised meaning that Nakamoto is not needed for bitcoin to continue. In order for you to obtain a bitcoin you need a bitcoin wallet to store the bitcoin. This will generate a bitcoin address, this is a unique code. These can be created whenever you need one. That code can then be used to send or receive money. The code is similar to how an email address works except the bitcoin code should only be used once.

In order to obtain one bitcoin ‘miners’ as they are called have to have high powered computers that solve complex computational math problems. The process is very complex with it involving coming up with hashes. At the minute the odds of a computer solving one of these problems is 1 in 6 trillion but the reward is currently 12.5 bitcoin worth currently €94,462. The amount of new bitcoin released with each mined bitcoin is called the block reward. The block reward is halved every 210,000 blocks. When it first started out in 2009 the block reward was 50. It is currently at 12.5 and is expected to drop to 6.25. sometime in the middle of 2020. There is a cap on the amount of bitcoins that can be mined with that limit at 21 million bitcoin. The fact that it is capped and after that limit no more bitcoin can be mined means that it is scarce which makes it much more valuable and which gives it its value in the first place. It also means as time goes on the cost of mining bitcoin becomes much more costly.

One main problem and a problem that caused many cryptocurrencies to fail before bitcoin was the double spending problem. As bitcoin wasn’t physical only virtual they had to come up with a way of stopping copying and pasting and spending bitcoin as much as they wanted. The answer was to use a central clearinghouse to keep a real-time ledger of all transactions which ensures that people only spend what they have. Fraud is prevented by a pseudonymous public ledger which holds an account of each transaction. It did require though a third party to administer it. Satoshi did away with this by publicly distributing the ledger, this is the “Block Chain”.

<https://bitcoin.org/en/how-it-works>

<https://www.wired.com/2011/11/mf-bitcoin/>

https://www.investopedia.com/terms/b/bitcoin-mining.asp

**Irish Connection**

Although it is not known who Satoshi Nakamoto it there are a few who have made the short-list of who it may actually be. One is a man by the name of Michael Clear. Clear graduated from Trinity in 2008. He was named the top undergraduate in computer science in Trinity, he was also the only student who studied theoretical cryptography as there was no other cryptographers at Trinity. His work after he graduated included working in AIB as an encoder which would leave him to working with cryptography, it would also give him a basic understanding of economics which would be vital in learning how bitcoin can best work. Although Clear did deny the possibility of him being Nakamoto he did also say “even if I was I wouldn’t tell you”.

<https://www.irishcentral.com/news/the-secret-irishman-likely-behind-bitcoin-the-internet-currency-code-131039168-237415801>

**The rise and slight fall**

When bitcoin first came onto the market at the end of 2009 the value of it was basically nothing. In July 2010 the price skyrocketed. By 900%. From $.008 to $.08. it wasn’t until April 2011 that one bitcoin was worth $1. By June it was up to $31. The value of it continued to grow quite fast but stabilized in the summer of 2016 around $600. 2017 seen the most aggressive year of growth for bitcoin. In January 2017 it was at $800 but by December 2017 it reached its peak at $19,783. This was a 1,824% rise in 12 months. For some context if you invested $5,000 in January 2017 you would have had $123,643 by December 2017. After December the value of Bitcoin plummeted down to $6,200 by February 2018 and has held at that $6/7k value for the past year.

<http://qz.com/68328/bitcoin-up-152-this-month-tops-1-billion-in-total-value/>

<http://fortune.com/2017/12/17/bitcoin-record-high-short-of-20000/>