What is Blockchain Engineering?

The blockchain industry offers a ton of work opportunities to those who are ready to take the bull by the horn. While many still believe that blockchain, cryptocurrency, and DeFi is a bubble, many have built careers in this industry. Whether or not the industry is a bubble is not important now. One of the career and work opportunities that blockchain offers is blockchain engineering.

Blockchain engineering might not be the most popular kid around but getting to know about it might give you just the advantage that you need. Sit tight and relax. You'll have all you need to know about Blockchain engineering in a minute.

Since the emergence of Bitcoin in 2008, there has been a lot of innovation around blockchain networks, cryptocurrencies, and decentralised technologies. Big corporations are getting interested in setting up blockchain institutions to explore the several options that blockchains had to offer. More so to improve the blockchain technology. Many startups are beginning to develop blockchain-enabled applications. Corporations are beginning to see the potential in the industry and as a result, many projects intended to pilot the paradigm shift are being swiftly developed.

How Does Blockchain Engineering Contribute To This?

Blockchain engineering involves the operations, designing, development, analysing, implementation, and supporting of a distributed blockchain network. Blockchain engineering is expert knowledge that is behind the development of computer networking, cryptography, data structures, and algorithms in Blockchain engineering and development companies such as Coinbase and other top companies.

A career in blockchain engineering requires experience in blockchain technology - Ethereum and Bitcoin. For giving solutions to technology or data consulting organisations, blockchain engineering typically requires strong abilities in creating and executing digital blockchain. Blockchain engineering is not just restricted to development. In reality, it assesses the needs of businesses and develops new or improved existing open source solutions.

Additionally, blockchain engineering requires working mostly on pre-existing platforms like Hyperledger and Ethereum and creating and deploying assets, accelerators, and infrastructure setup procedures. Additionally, ensuring that every application is safe in every way.

With blockchain engineering, you get to know the operational and functional aspects of the blockchain ecosystem. Additionally, blockchain engineering promotes the understanding of the emerging abstract models for blockchain technology. Without a doubt, there are still some aspects of blockchain that are still uncharted. It takes an in-depth knowledge of blockchain engineering to discover these aspects and hasten the transition from centralised internet to decentralised technology.

What you need to understand is that companies sometimes need/want to design and build private chain or side chain solutions. To do this, they need a custom smart contract that customises existing chains and engineering blockchain API.

Blockchain engineering can be summarised as follows:

- Using pre-existing Blockchain to improve the user experience for companies and corporations.
- Building decentralised apps to foster safe and enjoyable usage of blockchain technology.
- Understanding of building and using blockchain technology.

Industries Where Blockchain Engineering is Needed

Capital Markets

Blockchain engineering can automate trade lifecycles, streamline the entire trade process, and give all parties involved in transactions access to the same information about a deal. In this case, blockchain engineering would enable efficient data management, transparency, quicker processing cycles, less reconciliation, and even the elimination of some middlemen, such as brokers.
One of the first established players in the financial services industry to develop a blockchain-based product was Nasdaq. Its capitalization tables, which are used by private corporations to control shares in their companies and go by the name Nasdaq Linq, are powered by blockchain.

Cross-Border Payment

Blockchain engineering enhances cross-border payments by accelerating and streamlining the procedure, as well as dramatically lowering costs and eliminating many of the conventional middlemen. Consequently lowering the cost of money transfers.
The first bank in the UK to deploy blockchain for mobile app-based live international payments was Santander. The answer makes use of technology made available by Ripple, the company behind the blockchain-based Ripple exchange network and payment system. Blockchain engineering makes this possible.

Digital Identities

Blockchain technology can be applied with the use of blockchain engineering, for example, to know-your-customer requirements, where a digital single source of identification data might facilitate more frictionless account opening, and decrease resources and expenses, all while ensuring the privacy of data.
Several startups are creating applications with blockchain engineering in the identity management space. This prevents fraud and cyber crimes.

Blockchain Engineering Vs Blockchain Development

People always ask what the difference is between block engineering and blockchain development. The truth is few companies post job descriptions with ‘blockchain engineering. Many times, the job description of a blockchain engineer overlaps with that of other job titles like blockchain development. What would matter in each particular situation is the job description of each job.

Blockchain development simply refers to developing blockchains. There are two major kinds of blockchain developers; core blockchain developers and blockchain software developers. A core blockchain developer designs the architecture and security of the blockchain system. It simply means that the blockchain developers design the entire foundation of the blockchain. What the core blockchain developers designs are the foundation the blockchain software developer would build upon. The blockchain software developer would use the web architecture built by the developers to create apps, specifically DApps (Decentralised Apps) and varieties of the decentralised web.

A core blockchain developer designs blockchain and the consensus protocol. The role of a blockchain software developer is similar to that of a typical blockchain software developer but blockchain software development requires using tools such as truffle or solidity.

What you would notice is that blockchain software development is similar to blockchain engineering. The overlap and confusion usually occur in situations where companies have one person do the job of both a core blockchain developer and a blockchain software developer.

Blockchain Engineering vs Software Engineering

Software engineering involves developing, designing, maintaining, evaluating, and testing computer software. Software engineering has been defined as "an engineering discipline that is concerned with all aspects of software production". Software engineers design basic software requirements (functional, non-functional, and domain requirements). They also design the architecture, components, and interfaces of a software application. They also conduct software construction, testing, and maintenance.

Blockchain engineering overlaps software engineering in the case where it is important and necessary for a blockchain engineer to develop decentralised apps on pre-existing blockchain networks to support and improve the experience of blockchain technology. Blockchain engineering requires knowledge about smart contracts.

FAQs about Blockchain Engineering

Do I need a degree in engineering to become a blockchain engineer?

While a degree in engineering might be advantageous, you do not necessarily need a degree to become a pro at blockchain engineering. There are courses online that you can enrol for and be just as good or even better than someone who has a degree in engineering.

All you need is a good knowledge of blockchain, building smart contracts, and Decentralised Apps.

How much does a blockchain engineer earn?

The salaries of candidates in this role range from a low of $149,000 to a high of $220,000, with a median annual salary of $180,000. How much a blockchain engineer earns is dependent largely on the company employees.

Are blockchain engineers in hot demand?

The blockchain industry, the technology behind it and many of the opportunities that it has to offer are still majorly uncharted. With more companies adopting blockchain solutions, being a blockchain engineer is pretty much in hot demand right now.

What companies can hire blockchain engineers?

Any company looking to explore blockchain solutions to improve their experience would need an expert in blockchain engineering to help with the transition to decentralized web solutions.

Can I transition from software engineering/development to blockchain engineering?

Yes, you can. All you need is to become knowledgeable in blockchain, learn how to build smart contracts, and build decentralised applications.

Where can I learn blockchain engineering?

Platforms like Coursera, and Udemy offer free and/or paid courses in blockchain engineering.

Do colleges offer courses in blockchain engineering?

Blockchain engineering is still pretty much uncharted as such not many colleges offer courses in blockchain engineering. What you might find however are general courses in blockchain and blockchain management.

Is learning blockchain engineering worth it?

As businesses are integrating blockchain solutions into their businesses, learning blockchain engineering and becoming an expert at it puts you at the forefront of change. An opportunity like this should not pass you by.

How much does a beginner in blockchain engineering make?

An entry-level blockchain engineer with 0–1 year of experience can expect to make an annual salary of $110,000.

Conclusion

Times are changing and blockchain engineering might be just a big part of that change. Big corporations like Walmart, and Visa are building blockchain solutions. More corporations will. Blockchain engineering is without a doubt at the core of that.

If you are looking to learn blockchain engineering, note that not many companies use ‘blockchain engineer’ in their job posts. It is important for you to check the job description and if it fits into what you can do.