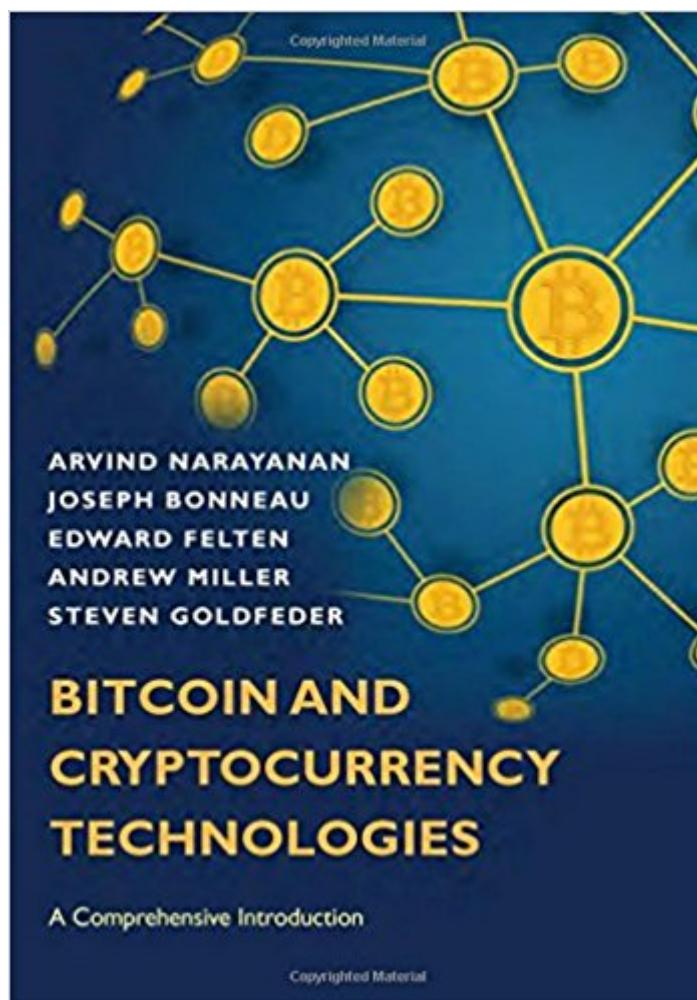**The book was found**

Bitcoin And Cryptocurrency Technologies: A Comprehensive Introduction

Synopsis

Bitcoin and Cryptocurrency Technologies provides a comprehensive introduction to the revolutionary yet often misunderstood new technologies of digital currency. Whether you are a student, software developer, tech entrepreneur, or researcher in computer science, this authoritative and self-contained book tells you everything you need to know about the new global money for the Internet age.How do Bitcoin and its block chain actually work? How secure are your bitcoins? How anonymous are their users? Can cryptocurrencies be regulated? These are some of the many questions this book answers. It begins by tracing the history and development of Bitcoin and cryptocurrencies, and then gives the conceptual and practical foundations you need to engineer secure software that interacts with the Bitcoin network as well as to integrate ideas from Bitcoin into your own projects. Topics include decentralization, mining, the politics of Bitcoin, altcoins and the cryptocurrency ecosystem, the future of Bitcoin, and more.An essential introduction to the new technologies of digital currencyCovers the history and mechanics of Bitcoin and the block chain, security, decentralization, anonymity, politics and regulation, altcoins, and much moreFeatures an accompanying website that includes instructional videos for each chapter, homework problems, programming assignments, and lecture slidesAlso suitable for use with the authors' Coursera online courseElectronic solutions manual (available only to professors)

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Customer Reviews

Honorable Mention for the 2017 PROSE Award in Computing and Information Sciences, Association of American Publishers"For people interested in the inner workings of Bitcoin and other

crypto-currencies, this is an excellent book."--Choice"This book provides an outstanding treatment of a complex phenomenon--the rise of cryptocurrency technologies."--Wilko Bolt, Journal of Economic Literature"This book is a very nice introduction to Bitcoin, its structure, how it can be used (and possibly abused), and how it might evolve in the future. . . . The authors have a relaxed tone and this book could easily be incorporated into an undergraduate curriculum."--Jeffrey Putnam, Association for Computing Machinery Computing Reviews

"Block chain technology is set to disrupt many different industries. If you want to get up to speed on this fast-moving technology, this book should be your first stop."--Campbell R. Harvey, Duke University"Among this book's many features are lots of nice, concrete examples and pleasant anecdotes, as well as a highly readable and enjoyable history of cryptocurrencies. Strongly recommended."--Tyler Moore, University of Tulsa

This outstanding book gives a comprehensive description of the technology behind bitcoin and related currencies. It covers not only the programs used inside the bitcoin system, but also gives a clear, intelligent discussion of such issues as the security risks, the incentives to maintain the system, the economics of mining and mining pools, and government regulation. It goes beyond bitcoin, with a chapter or two on applications which build upon bitcoin, development of related cryptocurrencies and future research directions. This is a serious effort, suitable as an introduction to research in the subject; each chapter includes appropriate references. There is also a wonderful preface about how the technology behind bitcoin evolved over a couple of decades. The book is really a pleasure to read, I couldn't put it down, and I've been recommending it broadly.

This book is one of a very few that offer a clear and balanced introduction to what crytocurrencies are, how they originated, and what the future might hold. This is not a book about bitcoin or the currency exchange markets in cryto, it is a book about the collection of technologies that make up what we now call "the blockchain" and how and why value can be stored and transferred securely and publicly on these chains.It does not address Ethereum or programmable blockchains in any real way, but it will give you deep foundational understanding about how such a thing can possibly exist. If you care about where networked computational technologies will be going in the next 25 years start here.

Excellent book. Lucid and thorough.

Very informative and easy to comprehend.

Well written introduction to the ideas and technology behind cryptocurrencies.

Bitcoin is a topic that evokes a sort of whodunit to many people. Created by an international man of mystery named Satoshi Nakamoto, it leads many to think this is a protocol that lends itself to a John Grisham novel. Many even think Bitcoin is a government conspiracy. But none of that could be further from the truth.As in introduction, Bitcoin is a digital currency and payment system created by a person named Satoshi Nakamoto. It was sent out as a proof of concept in 2008 and the open source code was released the following year. It uses a peer-to-peer system for transactions without the need any intermediate servers. The force behind Bitcoin is its ledger system, which is done via a blockchain. More about that later.In Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction, authors and noted Bitcoin experts Arvind Narayanan, Joseph Bonneau, Edward Felten, Andrew Miller and Steven Goldfeder have written a highly technical resource that is perhaps the best Bitcoin reference in print to date.Bitcoin is gaining serious momentum, but it is still not at a point where it is a ubiquitous payment system. Case in point that the book is available on eBay, Walmart, , publisherÃ¢Â Â™s web site and more. But not of them will accept Bitcoin as a payment method.In the following 11 chapters, the authors cover every core aspect of Bitcoin:1. Introduction to Cryptography and Cryptocurrencies2. How Bitcoin Achieves Decentralization3. Mechanics of Bitcoin4. How to Store and Use Bitcoins5. Bitcoin Mining6. Bitcoin and Anonymity7. Community, Politics, and Regulation8. Alternative Mining Puzzles9. Bitcoin as a Platform10. Altcoins and the Cryptocurrency Ecosystem11. Decentralized Institutions: The Future of Bitcoin?The authorÃ¢Â Â™s explain in technical detail how the underlying Bitcoin protocol and technology operates. Bitcoin also has a number of technical and security limitations which are also discussed.One of the more significant limitations that may turn out to be problematic is that the cryptographic algorithms in Bitcoin are hardcoded and fixed within in the protocol. There are only a few hash algorithms available and only one signature algorithm that can be used. Given that, there is concern (albeit limited), that the underlying cryptography in Bitcoin could be one day broken. While the logical solution may be to just change the protocols, the authors go into a detailed technical overview of why this ostensibly simple idea is not feasible.Truth be told, the same crypto security concern exist for the RSA cryptosystem which is based in part on the difficulty of factoring large numbers.Common wisdom says that Bitcoin is a fully anonymizing protocol. The authors

address that topic at length. The reality is that Bitcoin is for the most part anonymous, but not fully anonymous. A skilled adversary could use various tactics to determine who made a specific transactions.The notion that Bitcoin is anonymous annoyed someone so much that they created a web site with a long list of references and quotes Bitcoin's anonymity and privacy.The authorÃ¢Â Â™s detail how Ross Ulbricht, who created the Silk Road black market website, was ultimately caught. It was due in part to his inability to keep his public and private identifies separate. That enabled the FBI to connect them, which led to his arrest. The Ulbricht case demonstrated that itÃ¢Â Â™s quite hard to stay anonymous for a long time while being active and engaging in a course of coordinated conducts working with other people over time.Ulbricht thought that by using Tor, Bitcoin and other pseudo-anonymous systems, that he would be invisible to law enforcement. That should be a cautionary tale to others.Bitcoin could have been but another in a long line of cryptocurrencies and electronic cash. Its key differentiator is it decentralization and the use of blockchains. The Bitcoin blockchain is a public ledger of all transactions that occur on the Bitcoin network. The openness of the blockchain means any user can connect and send new transactions to it or verify a transaction.The blockchain lends itself to possible attack and the book details the ways in which it is secured.The companion website for the book has a number of videos and programming assignments. The programming assignments are quite helpful and explore the depth of designing and building a basic cryptocurrency.For those looking to get a highly detailed Bitcoin technical overview, this book is a must read. They provide both technical and real-world examples, included implementation methods of lessons learned from technical failures. The authors have created a highly readable comprehensive overview of the topic that will be of value to anyone looking to explore the most significant cryptocurrency of our times.

Very interesting and thorough explanation of how cryptocurrencies work and the details of Bitcoin. There are video lectures available for each chapter which are very useful!

This book does a nice job of explaining Bitcoin and crypto-currency technologies. The start of the book discusses technologies preceding Bitcoin and why many of these systems failed. From there the building blocks of how Bitcoin evolved were discussed. These sections were excellent; describing the main innovations of Bitcoin and how they were woven together to create Bitcoin.Wallets and mining are introduced and explained. Many different possible attack vectors on bitcoin were discussed. The balance was pretty good here between a technical discussion and a casual discussion. Most parts of the book are accessible to technical and non-technical

people.Legal implications of Bitcoin are discussed in Chapter 7. I thought sections here relied too heavily on news stories and anecdotes.In the final chapters many different alternative coins and technologies that overlay on the Bitcoin block-chain were introduced. I was pleased to see the innovative altcoins each had something about them including Ethereum. Drawbacks of certain altcoins were discussed but overall the authors did not show any favoritism to certain coins which was nice.I am giving the book 4-stars though because the writing in certain sections, along with word choice was not well suited for a printed book. For example Chapter 5 was entitled "Bitcoin Mining" and the first sentence of the chapter (p.104) is: "This chapter is all about mining", and the final sentence to the chapter introduction was: "In this chapter, we answer all these questions.". These sentences contain basically no information at all, and I found this pattern repeated throughout the book. In one place a technology was described as "cool".Overall, the content is a great introduction to crypto-currences but the authors could use some work on their penmanship.

CRYPTOCURRENCY: The Ultimate Guide on Cryptocurrency (Bitcoin Mining- Bitcoin Investing- Bitcoin for Beginners- Bitcoin Millionaire- Bitcoin Trading) Bitcoin: Bitcoin Basics - Bitcoin Blockchain - Cryptocurrency and the Future of Bitcoin - How Anyone Can Get Started Fast Plus Important Tips and Warnings. Bitcoin: Everything You Need to Know about Bitcoin, how to Mine Bitcoin, how to Exchange Bitcoin and how to Buy BTC. (Cryptocurrency Book 3) Bitcoin: The Ultimate Guide to the World of Bitcoin, Bitcoin Mining, Bitcoin Investing, Blockchain Technology, Cryptocurrency Mastering Bitcoin for Dummies: Bitcoin and Cryptocurrency Technologies, Mining, Investing and Trading - Bitcoin Book 1, Blockchain, Wallet, Business Bitcoin Hard Fork: Important Information, Everything You need to know about Bitcoin Cash BCH, News of Bitcoin and Cryptocurrency Technologies. Cryptocurrency: How to Make a Lot of Money Investing and Trading in Cryptocurrency: Unlocking the Lucrative World of Cryptocurrency (Cryptocurrency Investing and Trading Book 1) CRYPTOCURRENCY: WHAT YOU NEED TO KNOW ABOUT CRYPTOCURRENCY TO START MAKING MONEY TODAY (Blockchain, Millionaire, Bitcoin, Cryptocurrency, Money, Etherum, ... Money, Ethereum Investing, Altcoin Book 1) Bitcoin and Cryptocurrency Technologies: A Comprehensive Introduction Cryptocurrency: Understanding The Concept Of Cryptocurrency, Blockchain And Bitcoin - The Simple Introduction To Internet Money, It's Benefits And What You Need To Know About Investing Bitcoin Basics: Cryptocurrency, Blockchain And The New Digital Economy (Digital currency, Cryptocurrency, Blockchain, Digital Economy) Bitcoin vs Ethereum: Cryptocurrency Investing Tips You Wish You Knew (Cryptocurrency Success Tips Book 1) Ethereum & Bitcoin: The Bundle Guide to Blockchain Technology,

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