

Research Topics & Ideas: Blockchain and Cryptocurrency

About this document

This PDF contains 35 **blockchain and cryptocurrency research topics** for dissertations and theses, organized into 7 areas of blockchain and cryptocurrency, from blockchain beyond finance to supply chain, provenance and industry adoption. Each topic is written as a researchable question and linked to a completed dissertation (2022–2026, 21 universities), so you can see how it was studied in practice. Use it to shortlist blockchain and cryptocurrency dissertation topics and thesis ideas, then narrow one down to your own population, setting and timeframe.

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Blockchain beyond finance

1. Should a patient's remote monitoring data be secured by biometrics, a ledger, or both?

See it in a real dissertation: [Utilizing Biometrics and Blockchain for Enhanced Security of Remote Patient Monitoring \(RPM\) Data Sharing](#) · Amaturrahman Raihanah Medlock · Michigan Technological University · 2025

2. What does data integrity mean once sender, channel and receiver are all contested?

See it in a real dissertation: [Securing Data Integrity in Modern Overlay Networks: an Integrated Perspective from Theory to Practice](#) · Zhongtang Luo · Purdue University · 2026

3. Which incentives would make an edge device join a federated learning round?

See it in a real dissertation: [Incentive mechanism design in blockchain-based federated learning over edge clouds](#) · Xuanzhang Liu · Temple University · 2026

4. Which computer science fundamentals does a blockchain assignment actually teach?

See it in a real dissertation: [Designing, Integrating, and Evaluating Blockchain Assignments in the Undergraduate Computer Science Program](#) · Karol Lejmbach · Marquette University · 2026

5. Could a blockchain scale to a city full of embedded devices?

See it in a real dissertation: [Scalable Next Generation Blockchains for Large Scale Complex Cyber-Physical Systems and Their Embedded Systems in Smart Cities](#) · Ahmad J. Alkhodair · University of North Texas · 2023

Crypto culture, law and regulation

6. What kind of community forms around a cryptocurrency with no state behind it?

See it in a real dissertation: [Crypto-bros: anthropological and theological perspectives on cryptocurrency](#) · Evans, Jacob · University of Oxford · 2024

7. Is a digital asset property, and what follows either way?

See it in a real dissertation: [The legal nature of digital assets](#) · Hin Liu · University of Oxford · 2025

8. What do government blockchain documents actually ask universities to do?

See it in a real dissertation: [Higher Education Institutions in U.S. Blockchain Innovation Governance Documents](#) · Clariss Terracciano · University of Denver · 2026

9. How does a community form around a technology whose promise is ideological?

See it in a real dissertation: [Confronting Web3 Technology: Opportunities, Challenges and Community Formation](#) · Christopher-John Rogers · Portland State University · 2023

10. Why would a country adopt cryptocurrency, and do its citizens agree with it?

See it in a real dissertation: [Analysis of the Public Acceptance of Cryptocurrency in the Central African Republic](#) · Bruno Gbado · West Virginia University · 2025

Cryptocurrency markets and digital assets

11. Where does the arbitrage go in a market that has no order book?

See it in a real dissertation: [On Arbitrage in Single- and Multi-token Uniswap Markets](#) · Sun, Nathan · Harvard University · 2024

12. Could a trading algorithm learn to manipulate an order book without anyone noticing?

See it in a real dissertation: [Information-based models in centralised and decentralised exchanges: spoofing and private order flow](#) · Gabriel Garcia Arenas · University of Oxford · 2025

13. What would a digital currency have to offer before people gave up cash?

See it in a real dissertation: [Essays in Monetary Economics of Digital Assets](#) · Talha Samil Cakir · Purdue University · 2026

14. How closely is decentralized finance tied to the banking system it was meant to bypass?

See it in a real dissertation: [Decentralised finance and cryptocurrency: exploring market, risks, and the drivers of a transforming financial landscape](#) · Anoud Abdulaziz Alsaab · University of Southampton · 2026

15. What happens to a chain's security when block rewards run out and only fees remain?

See it in a real dissertation: [The Great Fee Migration : An Evaluation of Blockchain Protocols Without Block Rewards](#) · Edvinas Kruminis · Lancaster University · 2026

Protocols, consensus and incentives

16. Do the incentives in a blockchain protocol really make honest behavior the best strategy?

See it in a real dissertation: [Incentive Analysis of Blockchain Technology](#) · Rahul Reddy Annareddy · West Virginia University · 2022

17. Can selfish mining hide inside ordinary network latency?

See it in a real dissertation: [Latency Makes You Look Honest: Fully Undetectable Selfish Mining in Bitcoin](#) · Vejalla, Varun · University of Virginia · 2025

18. How do mutually distrusting parties agree on anything at internet scale?

See it in a real dissertation: [Secure Distributed Systems at Scale: From the Internet to Cyber-Physical Environments](#) · Akhil Sai Bandarupalli · Purdue University · 2026

19. What does it cost to broadcast reliably when anyone may join and nobody is trusted?

See it in a real dissertation: [Implementing RSA Accumulators for Asynchronous and Permissionless Reliable Broadcasting](#) · Eric Webb · Nova Southeastern University · 2025

20. Why do blockchains centralize anyway, and can anything hold it off?

See it in a real dissertation: [Centralization in blockchains: causes and mitigations](#) · Lucianna Carvalhaes Kiffer · Northeastern University · 2022

Security, privacy and cryptography

21. How do you keep data private on a blockchain designed to be public?

See it in a real dissertation: [Proxy Re-Encryption in Blockchain-based Application](#) · Wangcheng Yuan · San Jose State University · 2022

22. Which attacks does a blockchain inherit from the applications built on top of it?

See it in a real dissertation: [Securing blockchain technology from cryptocurrencies to smart contracts](#) · Sarwar Bin Sayeed · University of the West of Scotland · 2026

23. Where do cryptographic guarantees break down between the proof and the code?

See it in a real dissertation: [Enhancing the Security of Cryptographic Implementations](#) · Yongming Fan · Purdue University · 2026

24. Could people pool their data and keep control of it at the same time?

See it in a real dissertation: [Secure and Decentralized Data Cooperatives via Reputation Systems and Blockchain](#) · Abiola Salau · University of North Texas · 2022

25. How much security can a battery-powered sensor actually afford?

See it in a real dissertation: [Energy-efficient security for Narrowband IOT using blockchain and EP-CUMAC](#) · Hafizullah Kakar · University of North Florida · 2026

Smart contracts and decentralized applications

26. What is lost when a vague legal contract becomes an executable one?

See it in a real dissertation: [Paradigm Shift from Vague Legal Contracts to Blockchain-Based Smart Contracts](#) · Kritagya Upadhyay · University of North Texas · 2023

27. How would you price and settle a data trade that nobody can renege on?

See it in a real dissertation: [Towards a Blockchain-Based Data Trading Protocol](#) · Manish Adhikari · Illinois State University · 2024

28. Can a review system be made credible without an authority standing behind it?

See it in a real dissertation: [Using Blockchain to Ensure Reputation Credibility in Decentralized Review Management](#) · Zachary Zaccagni · University of North Texas · 2023

29. Could a ledger prove a competitive game was played fairly?

See it in a real dissertation: [Blockchain for Online Video Game Integrity](#) · Philip Salire · San Jose State University · 2023

30. Does putting a file system on a blockchain cost more than the tamper-resistance is worth?

See it in a real dissertation: [High Performance Distributed File System Based on Blockchain](#) · Ajinkya Rajguru · San Jose State University · 2023

Supply chain, provenance and industry adoption

31. How would you measure whether a blockchain actually improved a supply chain?

See it in a real dissertation: [Blockchain Technology in Supply Chain Management: Performance and Risk Management Perspective](#) · Leo Hong · University of Rhode Island · 2022

32. Does blockchain add anything to a food supply chain that resilience planning does not?

See it in a real dissertation: [Towards sustainability: the role of supply chain capabilities, resilience, circular economy, and blockchain technology in food supply chains](#) · Mehmood, Amina · University of the West of Scotland · 2025

33. Can a distributed ledger keep counterfeit medicine out of a supply chain?

See it in a real dissertation: [PharmaChain: Distributed Ledger Based Robust Solutions to Ensure Counterfeit-Free Pharmaceutical Supply Chain](#) · Anand K. Bapatla · University of North Texas · 2024

34. What would a blockchain for connected vehicles have to comply with before anyone shipped it?

See it in a real dissertation: [Building a compliant and interoperable blockchain architecture for U.S. connected and automated vehicles](#) · Hetzler, Andrew David · Purdue University · 2025

35. How fast does a blockchain have to be before contact tracing on it is usable?

See it in a real dissertation: [Blockchain Accelerators and an Application on COVID-19 Contact Tracing](#) · Tao Lǚ · Louisiana State University · 2022

How to turn a topic into your research question

A topic is a starting point, not something you can research yet. These four steps take you from a topic on this list to a focused question you can actually answer.

- 1. Shortlist three, not one.** Pick three topics from this list that genuinely interest you and fit the access you have to people and data.

Recommended reading: [How to find and choose a dissertation topic](#)

- 2. Read the dissertation behind each one.** Its literature review and its "recommendations for future research" section show you what is already known and what is still open.

Recommended reading: [How to find a research gap](#)

- 3. Narrow it to your setting.** Name one population, one setting and one thing you will measure or explore. That turns a broad topic into a question you can finish.

Recommended reading: [How to write a research question](#)

- 4. Line up your aims, objectives and questions.** Your committee will check that they agree.

Recommended reading: [Research aims, objectives and questions](#)

Work through these once and you will have a focused question rather than a broad topic, which is what the rest of your proposal is built on.