

# CRYPTO 101

A no-bullshit beginner's guide to Bitcoin, blockchains & beyond.

**By Antoine Mecker**

*I'm an engineer specialised in crypto. I've been studying this market for 10 years. It has evolved a lot. I saw it grow, I saw beautiful things emerge from it, as much as ugly scams. I also made all possible mistakes regarding investments, so I'll tell you what to avoid.*

*So, how do you explain crypto? Usually, when we want to refer to 'the fact of discovering Bitcoin' we use the rabbit hole analogy from Alice in Wonderland. It's an interesting domain because it touches many different topics: computer science of course, but also economics, what is money, monetary policies, the role of central banks, politics, energy through Bitcoin mining, game theory, distributed networks and so on. You'll understand quite quickly that it is a weird industry, chaotic. Its pace is dictated by cycles, the bear and bull runs. You have a mix of engineers, institutional investors, Dubai influencers, entrepreneurs, politicians, journalists, marketers, 0-risk-high-return scammers... Everything happens on Twitter and Telegram. Crypto has its own vocabulary, memes and culture. « HODL » « Have fun staying poor ».*

*I wrote this for anyone who keeps hearing about crypto and wants to actually understand it.*

## Chapter 01

# What is Bitcoin & Crypto?

The origin story, how it works, BTC vs ETH, and why custody matters more than anything.

## Bitcoin

You can't understand this industry without starting here. Bitcoin was published in 2008 in the ashes of the subprime crisis. The whitepaper title: A Peer-to-Peer Electronic Cash System. It is a MUST READ. The idea is simple. I can send you money without having a bank in the middle. For that to work, two things are required: users hold the money themselves, and a set of rules defines what you can or cannot do. No double spending. No central authority.

Bitcoin brings uniqueness to the internet. Everything is usually copy-pasted. Your bitcoins are truly yours. Nobody knows who created it. Satoshi Nakamoto. A single person, a group of developers? The only certainty is that Satoshi was smart and knew a lot about computer science and money.

The supply is hard-capped at 21 million. There will never be more. Many people consider Bitcoin digital gold for this reason. Personally, I don't think it behaves like digital gold anymore but I'll let you make up your own mind. I wrote about it in this article on Substack.

How does the network stay secure? Thousands of computers across the world compete to verify transactions. In exchange, they earn freshly mined bitcoins. The result is hard to find but easy to verify. Since thousands of machines operate simultaneously, no single entity controls the rules. That's what decentralized means.

## Ethereum

In 2015, a few people started to wonder: can we do more than a cash system? Ethereum is the answer. A global computer where you can run apps in a decentralized environment.

The main use case is Decentralized Finance, or DeFi: financial protocols that run on code. Borrowing money without talking to a banker. Earning yield from savings accounts controlled only by code. Trading without a brokerage account. In Europe we don't really need that. The financial system works fine. In Argentina, Nigeria, Lebanon... it's a different story.

Ethereum works roughly the same way as Bitcoin. The biggest difference: instead of mining, validators lock up money as collateral. The more you stake, the more likely you verify the next batch of transactions. This is called "Proof of Stake." Less energy. Whether it's more or less secure is still debated. I don't think there's a good answer to that question.

To clarify what I mean by "crypto." I'm not referring to a specific technology or a particular blockchain, but rather to a broader field: a set of concepts, ideas, and applications that aim to rethink finance, trust, and private property through decentralization. To oversimplify, it essentially comes down to the set {Bitcoin; DeFi}. Memecoins may use blockchain, sure, but to me they're not crypto.

## Self Custody: what matters the most

Buying Bitcoin on a platform, say Coinbase, doesn't mean you actually own that asset. You're in a contract with them, the exact same way as with your bank. If they go bankrupt, you'll be in line with other creditors.

The motto of crypto is "not your keys, not your coins." To hold your assets, you will need a wallet. Each wallet has an ID and a password. The ID is called "address" or "public key" and the password is called "private key." Never share it, never lose it, never store it online. That private key is backed up as a 12 or 24-word seed phrase. Write it on paper. Store it somewhere physically secure. That's it.

## Chapter 02

# The Different Asset Classes

Not all crypto is the same. Here's the map and where people get destroyed.

**The biggest beginner mistake is treating 'crypto' as one thing. Bitcoin and a dog-themed memecoin are not the same asset. They don't behave the same, they don't carry the same risk, and confusing them is how people lose money.**

Asset Class	Examples	What you're betting on
Layer 1 (blue chip)	BTC, ETH	These survive long-term
Layer 2s	STRK, ARB, OP	Ethereum scaling wins
Stablecoins (fiat)	USDC, USDT	The issuer stays solvent
DeFi tokens	UNI, AAVE	Protocol stays relevant. Institutions enter DeFi.
RWA tokens	ONDO, TetherGold XAUt	Real-world assets on-chain go mainstream
Alt L1s	SOL, AVAX, SUI	This chain beats Ethereum
Perp DEX tokens	HYPE (Hyperliquid)	On-chain perps eat centralised exchanges. Stocks gets traded there
Memecoins	DOGE, PEPE, WIF	You exit before everyone else
NFTs	Art, PFPs, gaming items	Cultural relevance sustains

## Layers 1: Standalone blockchains

A Layer 1 is the base blockchain. The foundation everything else is built on. Bitcoin is a Layer 1. Ethereum is a Layer 1. They handle security, consensus, and the final settlement of transactions. When people talk about 'the blockchain', they usually mean a Layer 1. The rule of thumb: the older and more battle-tested a Layer 1 is, the more you can trust it. Bitcoin has been running since 2009, Ethereum since 2015. That track record is worth something. In this category, the third contender is Solana. A lot of people love Solana because it is faster than Ethereum.

## Layer 2: Ethereum boosters

Layer 2s exist because Ethereum is sometimes slow and expensive when congested. The fix: run transactions on a faster, cheaper network, then periodically post the results back to Ethereum for final settlement. You get Ethereum's security without paying Ethereum's fees. Starknet, Arbitrum, Optimism are all Layer 2s.

## Stablecoins: not all stability is real

USDC and USDT are backed 1:1 by real dollars in a bank account. Boring, functional, as safe as the company behind them. DAI is backed by crypto collateral and governed by code more elegant, slightly more complex. Both are fine. What is not fine is algorithmic stablecoins with no real backing.

## DeFi Tokens: Are they stock, equity or something new ?

DeFi tokens are the native tokens of decentralized finance protocols. When you use AAVE to lend money or Uniswap to swap tokens, those protocols have a token attached. Sometimes it gives you governance rights (you vote on how the protocol evolves), sometimes a share of the fees it generates, sometimes both. The key question to ask with any DeFi token: does this protocol make real money? If yes, the token has a reason to exist. If the only use case is speculation, be careful.

## Perp DEX Tokens

Perpetual futures are a type of derivative that lets you bet on the price of an asset without ever owning it, with leverage. They are the most traded product in crypto by volume, by far. Historically this happened on centralised exchanges like Binance. Hyperliquid built a decentralised exchange specifically for this, on its own chain, and it actually works. HYPE is its token. The bet: on-chain perps eating into CEX volume is a structural trend, not a fad.

## RWA: real-world assets on-chain

RWA stands for Real-World Assets. The idea is simple: take traditional financial assets (treasury bills, bonds, real estate, private credit) and represent them as tokens on a blockchain. Why? Because it makes them programmable, composable with DeFi, and accessible to anyone with a wallet instead of just accredited investors with a brokerage account.

This space has grown seriously fast. Protocols like Ondo Finance bring US treasuries on-chain. Centrifuge tokenises private credit. BlackRock launched a tokenised money market fund on Ethereum. When BlackRock is doing it, it stopped being a crypto niche. RWA is one of the few sectors in this industry with obvious, immediate product-market fit.

The risk is not the technology, it's the legal wrapper. A token representing a real-world asset is only as good as the legal structure behind it. Read the fine print before putting money in.

## On memecoins: the honest version

I won't pretend they don't exist. Some people made life-changing money. But most people clearly didn't. There's no underlying value, no revenue, no roadmap. It's a game of musical chairs and the music always stops. If you want to play, use money you're genuinely prepared to lose entirely. Not 'probably lose.' Entirely.

## Chapter 03

# Platforms and tools I recommend

Where to buy, where to store, which tools to use.

## Trading

### Centralized Exchanges - CEX

This will depend a lot on where you live. Exchange regulation can change so be sure you are authorised to trade on them. You'll know quickly once you open their websites.

Exchange	Best for	Regulated	My take
Coinbase	First-time buyers, US/EU	Yes (US/EU)	Best UX. Most trusted. Fees are the price of that trust.
Kraken	Security-conscious users	Yes (US/EU)	Never been hacked. Strong track record in Europe.
Bitstamp	EU retail, simple trades	Yes (EU)	Oldest EU exchange. Conservative and reliable.
Bitpanda	European beginners	Yes (EU)	Great onboarding. Good for Europeans starting out.
Binance	Active traders, altcoins	Complex	Biggest volume. Ongoing regulatory issues. Eyes open.

I trust any exchanges on that list. Even Binance which is the biggest one but yet has complex relations with regulators.

### Decentralized Exchanges - DEX

Decentralized Exchanges are for more advanced users. To access any DEXs, you need to already have a personal wallet and know how to use it.

There are DEX where you can trade spot assets. It is the case of Uniswap. Some DEX are dedicated to derivative products (mainly perpetual futures), like [Extended](#). Other combine both like Hyperliquid. They are called decentralised because you remain in self-custody of your funds.

For spot trading, we usually don't use Uniswap (or any other spot DEXs) directly. There are dozens of DEXs out there, each have their own liquidity and might now give the exact same prices at the same time. So to be sure to have the best price, we use « aggregators ». I always use [LlamaSwap](#). I don't think there is better.

Regarding leveraged trading, I personally use [Extended](#) as I like the team behind but most people use Hyperliquid. Hyperliquid is the biggest one of this category.

## Wallets

A wallet is the most important tool in your crypto journey. This is where you actually hold your assets. Not Coinbase, not Binance. Your wallet.

There are two types. Cold wallets are physical devices, about the size of a USB key, that store your private key completely offline. They only connect to the internet when you're making a transaction. This makes them extremely hard to hack. Ledger is the most popular, a French company. If you go that route:

buy only from the official website, never from Amazon third-party sellers, never second-hand. I'd also recommend getting it delivered to a pickup point rather than your home address. Data leaks happen. Being your own bank means treating security like a bank would.

Hot wallets are software wallets that live on your phone or browser. They're connected to the internet permanently, which makes them more convenient but also slightly less secure. You'll need one to interact with DeFi apps on a daily basis. I personally use Rabby. More precisely, I use a Rabby account connected to my Ledger. The Base app is apparently solid too. Think of your cold wallet as your savings account and your hot wallet as the cash in your pocket. You don't walk around with your life savings in cash.

Start simple. One Exchange, one wallet. Use small amounts and interact with apps. You can optimise later.

## Chapter 04

# Lessons from My Own Journey

What nearly a decade in this industry actually taught me.

I've been in crypto since 2017. I caught the ICO bubble. I've bought the top in 2018. I watched DeFi summer, the NFT mania, lost thousands on Metaverse bullshit, I had money in FTX, I've been a victim of a phishing link and lost 5k..... I went through it all! Here's what I actually learned.

## Volatility is the price of admission

Bitcoin has dropped 80%+ from its peak. Three times. It came back each time. But a 80% drop feels completely different from the outside versus the inside. From the outside it's a statistic. When it's your money, watching your portfolio go from €50k to €9k in six months, it's something else. The people who made money are the ones who could hold through it without needing that money for rent. Never invest money you need in the next 2-3 years. Crypto is not a short-term savings account.

## Cycles determine everything

This industry runs in cycles, driven largely by the Bitcoin halving (when the Bitcoin emission rate is divided by 2), roughly every 4 years, the rate of new BTC being mined gets cut in half. Historically a bull run follows 12-18 months later. Then a peak, euphoria, a crash, a long bear market, and it starts again. The mistake I made in 2018 was not understanding this. I thought the bull run was the new normal. It wasn't. Know where you are in the cycle. In a bull market everyone looks like a genius. In a bear market you find out who actually knew what they were doing.

Macro context matters too. The Fed raising rates in 2022 didn't just crash equities, it triggered one of the worst crypto bear markets in history. Crypto doesn't exist in a vacuum, even when it pretends to.

To add to that, I feel like the cycles thesis is shifting a little bit and I'm not so sure it will keep driving the market. The halving doesn't have the same impact as before. Crypto is becoming institutional. I think the macro context and the FED interest rate is the most important tool to monitor.

## The altcoin trap

I fell into this one hard. You buy Bitcoin, it 3x's, you want more. You find an altcoin that went up 10x and think you missed Bitcoin but you won't miss this. Finding a new token selling insanely sexy promises. A token that will change the world. You buy at the top. The altcoin drops 95% and never recovers. I watched this happen with dozens of projects in 2018. I watched it happen again in 2022. Most altcoins don't survive a bear market. Liquidity dries up, teams disappear, the Discord goes quiet, and the token you bought because of a slick whitepaper goes to zero. Altcoins are speculations, not investments. Size accordingly. Your token investment selection must be based on real data such as the revenues.

## The metaverse/narrative lesson

I lost real money on metaverse NFTs. Land in Decentraland, tokens tied to virtual worlds that nobody actually used. I think I've bought an apartment in a metaverse for 2 ETH. I feel so stupid admitting that. The hype was everywhere in 2021, the narrative was compelling, the pitch decks were beautiful. But narrative and usage are two different things. I learned to ask one question before putting money into anything: do real people actually use this today, not in the roadmap, not in the vision, today? If the answer is no, the risk profile changes completely. Is it answering a need? You will quickly learn that the answer is no for 95% of the projects of this industry.

## FTX: I had money there

I had funds on FTX when it collapsed. November 2022. I watched the exchange I trusted freeze withdrawals in real time. That was a painful and expensive reminder of something I already knew but hadn't fully acted on: not your keys, not your coins. An exchange holding your crypto is not the same as you holding your crypto. I use exchanges to buy. Everything else lives in a wallet I control. That rule is now non-negotiable for me.

## I lost 5k to a phishing link

This one still hurts. A convincing fake website, a transaction I approved without reading carefully, and 5k gone in seconds. No recourse, no customer support, no chargeback. That's crypto. The attackers are professionals. They build pixel-perfect clones of real websites. They buy Google ads so their fake site appears above the real one in search results. The fix is simple but you have to actually do it: bookmark every single site you use. Never click a link from a search engine, a DM, a post on socials or an email to access a DeFi app. Ever.

## Security basics I learned the hard way

Hardware wallet for anything above a few hundred euros. Authenticator app for 2FA, not SMS. A dedicated email address for crypto. Never share your seed phrase with anyone, ever, under any circumstances. If someone is asking for it, it's a scam, 100% of the time. And read what you're signing before you approve a transaction. Every time.

## The one thing that would have saved me most of my mistakes

Position sizing. Putting too much into one bet is how you get hurt when you're wrong, and you will be wrong. I now have a simple rule: nothing I'm not willing to lose entirely goes above 5% of my portfolio. The asymmetric bets, the high-conviction plays, stay small enough that if they go to zero, I'm still in the game. The goal is to survive.

# One last word

You now have the map but you must discover by yourself and don't trust people, including me, blindly. The best thing you can do after reading this is open a wallet, buy a small amount of ETH, and try sending it somewhere. Use AAVE. Swap something on Uniswap. Make the mistakes with €50 before you make them with €5000. Nothing in this guide will stick the way a real transaction does.

This industry rewards the curious and punishes the impatient. The people I've seen do well over the years are not necessarily the smartest or the most technical. They're the ones who kept learning through the bear markets, who didn't panic sell, and who treated every mistake as tuition rather than a reason to quit.

I've been in this since 2017 and I'm still learning. The space moves fast. New protocols, new narratives, new risks. Subscribe to my [Substack](#) if you want to keep up. Good luck and enjoy!

**The rabbit hole is deep. Now you have a map.**

— *Antoine*