

# ADTC IGDTUW

## Blockchain Roadmap



### 1. Basics of Blockchain Technology

Understand the core concepts like decentralization, consensus mechanisms, and smart contracts.

[What Is Blockchain? | IBM](#) - IBM Blockchain

[Understand the Blockchain in Two Minutes](#) - Intro To Blockchain

[Free Blockchain Tutorial - The Complete Course On Understanding Blockchain Technology | Udemy](#)

[Free Blockchain Courses — TECH](#) - Harvard course on Blockchain

### 2. Learn About Cryptography

Gain foundational knowledge in cryptography, as it's essential for blockchain security.

[Cryptography | Computer science theory | Computing | Khan Academy](#) -

Hash functions and Public-key cryptography.

[What is a Cryptographic Hashing Function? \(Example + Purpose\)](#) - Cryptography and Hashing

### 3. Understand Blockchain Architecture

Dive into the architecture of popular blockchains like Bitcoin and Ethereum.

[What is Ethereum: Working, Types, Features - GeeksforGeeks](#)

[Blockchain Structure & Working | Edureka \(YouTube\)](#)

[Blockchain Architecture Explained: How It Works & How to Build](#)

[Exploring Blockchain Architecture: Key Insights](#)

### 4. Get Started with Smart Contracts

Learn how to create smart contracts, which are fundamental for decentralized applications (dApps).

[Introduction to smart contracts | ethereum.org](#)

[Stellar | Smart Contract Basics](#)

[Solidity Tutorial for Beginners - Full Course in 4 Hours \(2023\)](#)

## 5. Learn Ethereum and DApp Development

Understand Ethereum development environment, tools, and how to build a dApp.

[How to Build Ethereum Dapp \(Decentralized Application Development Tutorial\)](#)

[\(27\) Learn Blockchain, Solidity, and Full Stack Web3 Development with JavaScript – 32-Hour Course - YouTube](#) - FreeCodeCamp comprehensive dApp course

## 6. Dive into Decentralized Finance (DeFi)

Understand how DeFi protocols work, their role in Blockchain, and build a DeFi project.

[What Is DeFi? Your Comprehensive Guide to Understanding Decentralized Finance | Bybit Learn](#)

[What is DeFi? A beginner's guide to decentralized finance](#)

[What is DeFi in Crypto? 🤖 Decentralized Finance Explained! 🧠 \(Ultimate Beginners' Guide on DeFi📖\)](#) - Youtube guide (Must Watch)

[Lending And Borrowing In DEFI Explained - Aave, Compound](#) - Defi Protocols

## 7. Learn About Blockchain Interoperability and Layer 2 Solutions

Understand interoperability among blockchains and learn about scaling solutions.

[Layer 2 | ethereum.org](#) - Ethereum guide

[What are Layer-2 solutions? A guide to L-2 blockchains - MoonPay - MoonPay](#)

[Crypto Education - Layer 2 Blockchain Solutions Explained | Animation | Cryptomatics](#)

[What Is Cross Chain DeFi? | Chainlink](#)

[Blockchain Interoperability - Cross Chain Technology Importance](#)

## 8. Explore Non-Fungible Tokens (NFTs) and Metaverse Development

Understand NFTs, the underlying technology, and how to create them.

[NFT Explained In 5 Minutes | What Is NFT? - Non Fungible Token | NFT Crypto Explained | Simplilearn](#)  
[Beginner's Guide to NFTs: What Are Non-Fungible Tokens? - Decrypt](#)  
[Cryptocurrency Wallet: What It Is, How It Works, Types, and Security](#)

## **9. Learn About Web3 and Decentralized Storage**

Understand Web3 concepts and decentralized storage solutions for data persistence.

[Set up web3.js to use the Ethereum blockchain in JavaScript | ethereum.org](#)

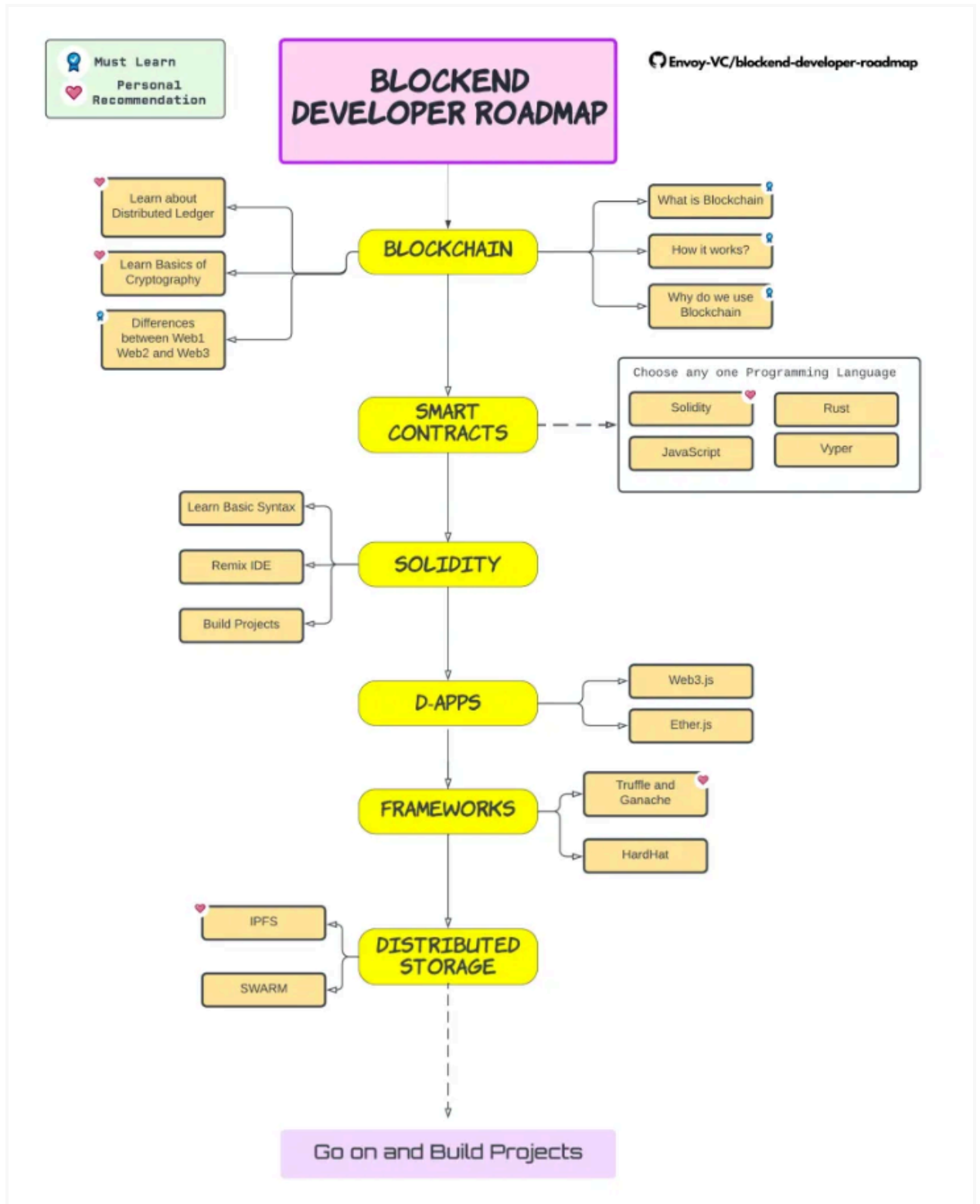
[The Decentralized Storage War: Filecoin vs. Arweave | CoinMarketCap](#)  
[Web3 Tutorial: Introduction for Beginners](#) - Best Playlist for Web3

## **10. Polygon**

Learn how to build and deploy dApps, launch ZK rollups and validiums as Layer 2s on Ethereum, spin up nodes, and find out about the latest in zero-knowledge research.

[Polygon Knowledge Layer](#)

## Basic and Intermediate Learners



Advanced Learners may refer to the following pdf-  
[Blockchain.pdf](#)

ADTC

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