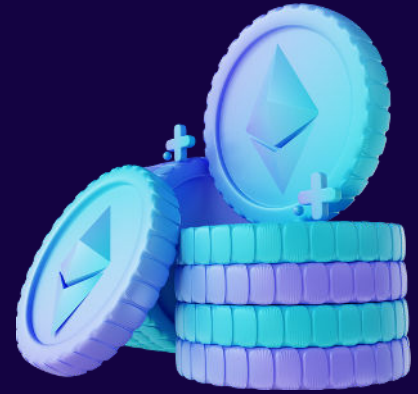


# ETHEREUM 2 DEVELOPMENT MASTERY SPECIALIZATION



Introduction

- JavaScript Introduction
- Variables
- Data Types
- Conditional Statements
- Arrays
- Loops
- Functions
- Objects
- Inheritance
- Git & Github

02

Bitcoin Explanation

- Decentralization
- Blockchain Technology
- Mining
- Cryptography
- POW

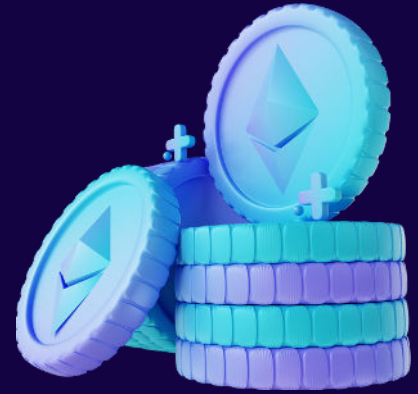
01

The Ethereum Virtual Machine

- Decentralized Execution Chaged
- Smart Contracts
- GAS
- Ethereum 1.0 vs Ethereum 2.0 Phases
- PoW, PoS, PoA
- Introduction to Validators, Attestations, and the Beacon.Shard Chain
- Staking Rewards
- Sharding Concepts
- Transaction and Signing
- Networks
- Wallets
- Blockchain Types

03

# ETHEREUM 2 DEVELOPMENT MASTERY SPECIALIZATION



## Smart Contracts With Solidity

- Introduction with Remix
- Solidity Overview
- Data Types in Solidity
- Variables and Functions
- Control Structures
- Modifiers
- Mapping and Structs
- Events and Logging
- Ether and Units
- Inheritance
- Error Handling
- Banking System Smart contract (will create UI later)
- JSON-RPC API functions
- ERC-20 , ERC-721 and ERC1155
- OpenZipline smart contracts
- Deploy to the blockchain network

04

05

## UI Integration for Web2 and Web3

- HTML/CSS
- React JS overview
- Next JS overview
- IPFS
- Wallet Connect
- Ether JS
- Unit testing
- Integration with smart contracts
- Create wallet application
- Create a bank system from UI and integration with smart contracts created before
- How to integrate between web2 and web3
- Web2 backend Overview
- Node JS overview with MongoDB
- Normal backend integration with smart contracts (integration web2 and web3 backend)

# ETHEREUM 2 DEVELOPMENT MASTERY SPECIALIZATION



Final Project using Web2 and Web3

The project will include (smart contract-front end with Next JS, Ether JS integration, saving normal data with Node JS and MongoDB-upload project at vercel and smart contract to test net)

**06**

**IN COLLABORATION WITH**

