UCD WORKSHOP

AI AGENTS ON THE BLOCKCHAIN

VECHAIN BUILDERS WORKSHOP

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V VeChain
WEB3 FOR BETTER

INTRODUCTION

WORKSHOP PLAN

This workshop is aimed at covering all the elements of building a fullstack AI Agent that assists users in fetching data directly from VeChain's blockchain.

Intro to Blockchain & VeChain SDK

Intro to AI Agents & ElizaOS

Implement VeChain AI agent

VeChain

BLOCKCHAIN 101

Blockchain is a database in the form of a distributed ledger.

Most blockchains are:

- **Decentralized and trustless**, with distributed control
- **Resilient**, with no single point of failure
- **Immutable**, providing tamper resistance
- **Secured** by cryptograph, enabling integrity and pseudonymity

VeChain

WHAT'S VECHAIN?

VeChain is a layer 1 blockchain designed for real world use cases

Interoperable
EVM Compatible

Predictable Cost
VET & VTHO

Scalable
Clauses

Easy of Use
Fee delegation

Reliable
Uninterrupted since 2018

Sustainable
Low carbon emissions & VeBetter

VeChain

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GLOBAL REACH

BUSINESS USERS

Walmart China

BYD

LVMH

H&M

RESEA PROJECT

BMW

PARTNERS

BCG BOSTON CONSULTING GROUP

pwc

UFC

BANK FRICK

CRÉDIT AGRICOLE

INFRASTRUCTURE SUPPORTERS

coinbase

Bitcoin Suisse

N26

Revolut

LEGEND TRADING

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VEBETTER GRANTS

The VeBetter Grant Program supports developers that want to build sustainability-focused, X2Earn dApps, tools, or infrastructure on the VeBetter platform.

App Grants

$30k

For sustainability-focused apps that leverage X2Earn mechanics & can demonstrate a measurable contribution to sustainability or a sustainable lifestyle.

Tooling Grants

$50k

For teams working on protocol development, developer tools, or infrastructure that can improve the VeBetter ecosystem

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VeChain API

https://mainnet.vechain.org

VeChain SDK

https://github.com/vechain/vechain-sdk-js

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READ DATA

Read Blocks
Requires block number

getBlockCompressed()
getBlockExpanded()

Read Transactions
Requires transaction ID

getTransaction()
getTransactionReceipt()

Read Accounts
Requires account address

getAccount()

Read States & Views
Requires contract ABI
Contract address

read.name()
read.balanceOf()
read.transfer()

Read Events & Logs
Requires contract address
Optional: Filters

filterRawEventLogs()

Read VET Transfers
Optional: Filters

filterTransferLogs()

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LISTEN TO CHANGES

VET Transfers
Optional: Filters

getVETtransfersSubscriptionUrl()

Transactions
Optional: Filters

getNewTransactionsSubscriptionUrl()

Blocks

getBlockSubscriptionUrl()

Events
Requires *from* and/or *to* address
Emiter contract address

getEventSubscriptionUrl()

Beats
Contract address
Bloom filters

getBeatSubscriptionUrl()

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WRITE DATA

Requires:

1. Private Key to sign the transaction (wallet)

2. Define Clauses within the transaction

3. Calculate how much gas the transaction will cost

4. Build a transaction object with all the previous information

5. Sign & send the transaction to the network

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ElizaOS and AI Agents

https://elizaos.ai

FOLLOW ALONG

To follow along, please please clone this GitHub repository:
https://github.com/vechain/ucd-workshop

```
$> git clone https://github.com/vechain/ucd-workshop.git
```
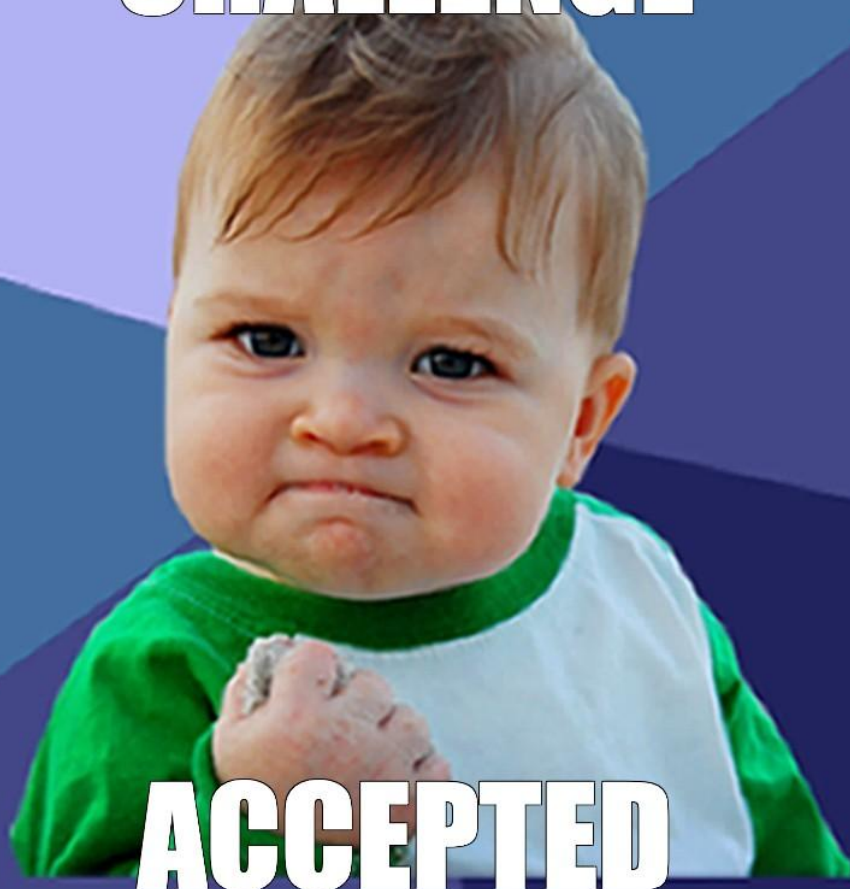
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OPENAI API KEY

bit.ly/ucd-workshop

funded with $1K
expires today

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CHALLENGES

Complete any of these challenges:

1. Retrieve the balance of an account
2. Retrieve the alias of an account
3. Wire the **Deposits** and **Withdrawal** tools to the agent
4. Get the B3TR balance of an address
5. Get the total number of transactions from the last block
6. Deploy on X (aka Twitter, API keys free at developer.x.com)

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Resources

1. VeChain SDK Documentation

2. VeChain API Documentation

3. VeWorld Wallet for iOS, Android and Chrome

4. ElizaOS Plugins

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Thank you!

I wish you the best of luck in your future endeavors.

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