Package: ShinyBlock (via r-universe)

October 11, 2026

Type Package

Title Multi-Protocol Blockchain Simulator and Enterprise Ledger Framework

Version 0.1.1

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Description An interactive framework for simulating blockchain protocols using a hybrid R-Shiny and Python architecture. The package provides tools to visualize peer-to-peer network maps, manage supply chain logistics on-chain, and execute cross-border settlements via smart contract logic. It leverages the 'reticulate' package to perform standardized cryptographic operations, including SHA-256 hashing, Merkle Tree construction, and ECDSA key generation. This tool is designed for pedagogical demonstration and rapid prototyping of distributed ledger requirements.

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Encoding UTF-8

LazyData true

Imports shiny, reticulate, reactable, networkD3, bslib, jsonlite

Suggests testthat (>= 3.0.0), knitr, rmarkdown

SystemRequirements Python (>= 3.7), ecdsa (Python package)

VignetteBuilder knitr

Roxygen list(markdown = TRUE)

RoxygenNote 7.3.3

Config/testthat/edition 3

URL https://github.com/ikemillar/ShinyBlock

BugReports https://github.com/ikemillar/ShinyBlock/issues

Config/pak/sysreqs
cmake libglpk-dev make libicu-dev libpng-dev libuv1-dev libxml2-dev python3 zlib1g-dev

Repository https://ikemillar.r-universe.dev

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`install_blockchain_deps` *Install Python Dependencies*

Description

Creates a virtual environment and installs ecdsa for blockchain simulation.

Usage

```
install_blockchain_deps()
```

`launch_blockchain` *Launch the Blockchain Protocol Simulator*

Description

This function launches the Shiny dashboard which communicates with a Python-based cryptographic engine to simulate 15 blockchain requirements.

Usage

```
launch_blockchain()
```

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