

Project Description

PyKen x Plutuscope is a developer toolkit that makes Cardano smart contract development more **accessible, testable, and transparent**. It bridges Python and Aiken, allowing developers to:

- Write validator logic in a **Pythonic DSL (PyKen)** and transpile it into Aiken for compilation and deployment.
- Debug and explore validator execution using **Plutuscope**, a CLI-based trace visualizer with tree views, colored true/false checks, and raw execution logs.

Purpose & Functionality

- **PyKen** lowers the entry barrier for Python developers by offering a familiar syntax for Cardano contracts.
- **Plutuscope** enhances validator debugging with automated `.ak` scanning, trace injection, and step-by-step execution visualization.

Target Audience

- Python developers new to Cardano.
- Auditors and judges reviewing validator behavior.
- Educators teaching Cardano smart contracts.
- Hackathon builders seeking rapid prototyping & debugging tools.

Track

Developer Tooling & Infrastructure Track – empowering Cardano devs with cross-language abstractions and advanced debugging utilities.

Leveraging Cardano's Capabilities

- Built on **Aiken**, ensuring full compatibility with Cardano's Plutus V2.
- Provides safer contract development via **trace-driven debugging**.
- Expands Cardano adoption by engaging the **global Python developer community**.
- Strengthens reliability and education within the ecosystem by making validator logic **transparent and verifiable**.