

TECHFAIR 2026

STENCIL

THE CHALLENGE

Building the same app for web and native platforms often means rewriting the UI and reconnecting it to the backend each time. Most tools work for only one platform.

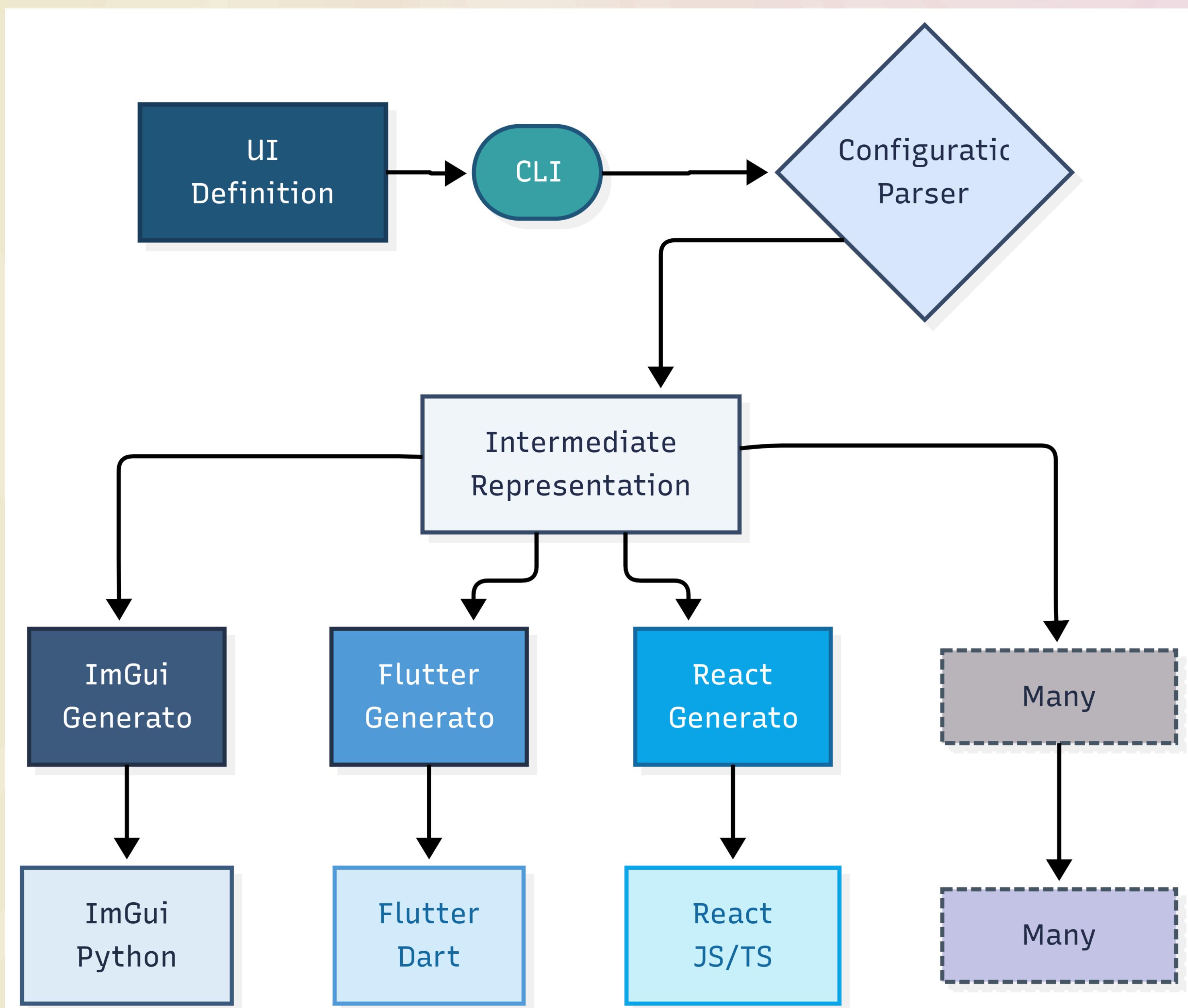
The challenge is to use a single UI definition to create multiple platform-specific interfaces without changing behavior or backend logic.

ABSTRACT

One UI definition. Six+ rendering targets. Zero framework expertise required.

Stencil generates production-ready interfaces for React, HTML, Flutter, Tkinter, ImGui, and Curses from a single declarative configuration—spanning web, mobile, desktop, game tools, and terminal applications.

ARCHITECTURE DESIGN



NOVELTY

This project uses a single declarative UI definition to generate multiple platform-specific interfaces with shared interaction logic and structured backend callback stubs.

RESULTS

The system generates platform-specific user interfaces for React, Flutter, and Tkinter from a single UI definition. The same UI structure and interaction logic are preserved across all supported platforms, and additional platforms can be supported by adding new generators.

SUSTAINABLE DEVELOPMENT GOALS



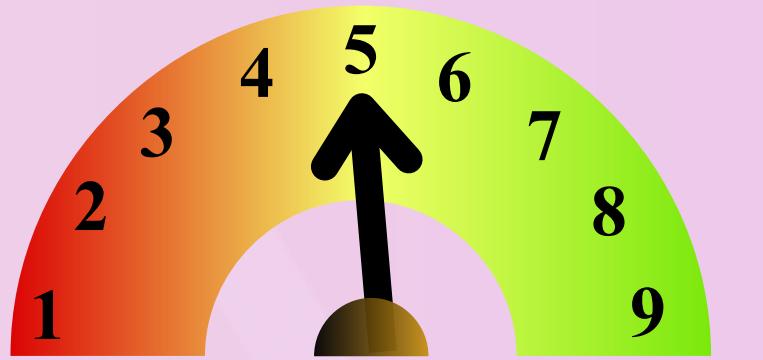
TRL
5



MRL
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IRL
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PUBLICATION

HACKATHON

PATENT

STARTUP