

Coding Challenge: Weather Intelligence Engine

1. Task Overview

Build a single-screen weather intelligence dashboard that:

- Merges live weather + air quality data
- Adapts UI based on device conditions (battery, network)
- Uses reactive streams w/ backpressure

2. Technical Requirements Architecture :

- Clean separation of data/domain/presentation layers
- Dependency injection with explicit contracts
- State management handling 5+ concurrent edge cases
- Do unit tests and widget testing.

Performance:

- 60fps animations during data refreshes
- Memory-efficient stream handling
- Conditional background fetching

Production Readiness:

- Systematic error handling (not just try/catch)
- Observability via dev-mode overlay
- Cache strategy documentation

Submission

GitHub repo with atomic commits

README .md with architecture explanation

Short video demo - screen recording