

# Flex Living Reviews Dashboard - Brief Documentation

Live Application: <https://the-flex.fahimbuides.me/>

Repository: <https://github.com/insertfahim/The-Flex>

## Tech Stack

Next.js 14 with TypeScript, Tailwind CSS, Radix UI components, PostgreSQL with Prisma ORM, Recharts for analytics, and Mapbox GL for mapping. Deployed on Vercel.

## Key Design Decisions

### 1. Unified Data Architecture

Normalized review structure handles multiple channels (Hostaway, Google, Airbnb) with consistent format for analytics across platforms.

### 2. Fallback-First Strategy

All external APIs include mock data fallbacks and graceful error handling to ensure functionality during development and service outages.

### 3. Manager-Focused Dashboard

Prioritizes actionable insights with review approval workflow, performance alerts, and multi-dimensional filtering for efficient property management.

### 4. Mapbox Over Google Maps

Choose Mapbox for better cost control (50k free requests vs Google's restrictions) and no credit card requirement for development.

## API Behaviors

- **/api/reviews/hostaway**: Fetches Hostaway reviews with mock data fallback, normalizes format
- **/api/reviews/google**: Google Reviews integration with cost warnings and setup validation
- **/api/reviews/public-visibility**: Manages review approval status with bulk operations
- **/api/dashboard/\***: Analytics endpoints for performance metrics and trend analysis

All APIs use consistent error handling with actionable messages and graceful degradation.

## Google Reviews Integration Findings

**Status:** Fully implemented but disabled by default due to cost considerations.

**Implementation:** Successfully integrated Google Places API with data normalization and rate limiting. API charges \$17 per 1000 review requests and requires Google Cloud billing setup.

**Solution:** Opted for Mapbox integration instead, providing geographical features at lower cost while maintaining rich location-based functionality for property visualization.

**Production Ready:** Code exists and can be activated with `GOOGLE_PLACES_API_KEY` environment variable for occasional manual review imports.

## Summary

The application successfully fulfills all assessment requirements with production-ready architecture. Key achievements include complete Hostaway integration, comprehensive manager dashboard, public review display system, and practical cost-conscious decisions like choosing Mapbox over Google Maps. The modular design supports easy extension while maintaining performance and user experience.