

Tech stack used

- Frontend
 - React + TypeScript
 - Vite (dev/build)
 - Tailwind CSS (styling)
 - Recharts (trend chart)
 - Axios (HTTP)
 - Vitest + React Testing Library (tests)
- Backend
 - Node.js + Express
 - MongoDB + Mongoose
 - Axios (Hostaway integration)
 - MongoDB Aggregation (metrics/trends)

Key design and logic decisions

- Clean, simple UI:
 - Light background, white cards, rounded corners, subtle shadows.
 - Responsive grid: 1–3 columns depending on screen.
- Clear data flow:
 - Dashboard loads three things:
 - Reviews list
 - Per-property metrics (avg rating, totals, approval rate)
 - Monthly trend data
 - Filters live in the frontend and are sent to the backend as query params.
- Moderation model:
 - approved: internal moderation (approve/reject)
 - showOnWebsite: controls public visibility
 - They're separate so you can approve a review but choose not to show it.
- Safer rendering:
 - Check arrays before mapping.
 - Handle null numbers before calling toFixed (fallback to "N/A").
- Dev convenience:
 - Vite proxy forwards /api to the backend in dev.
 - TypeScript everywhere for basic safety.

API behaviors

- GET /api/reviews
 - Filters (all optional): rating_min, category, channel, fromDate, toDate
 - Sorting: sortBy (createdAt by default), sortDir (asc/desc)
 - Returns an array of reviews.
- PATCH /api/reviews/:id
 - Update fields like { showOnWebsite: boolean }

- Finds by reviewId. Returns updated review or 404.
- POST /api/reviews/:id/approve
 - Body: { approved: boolean }
 - Sets moderation state. Returns updated review or errors (400/404).
- GET /api/reviews/listings
 - Aggregates by property:
 - propertyId, listingName
 - avgRating, totalReviews, approvalRate (0–1)
 - Used for KPI cards.
- GET /api/reviews/trend
 - Monthly buckets (YYYY-MM) of approved reviews:
 - avgRating, reviewCount
 - Used for the line chart.
- GET /api/hostaway
 - Pulls reviews from Hostaway (needs HOSTAWAY_TOKEN).
 - Upserts by reviewId to avoid duplicates.
- Common errors
 - 400: bad data (e.g., approved not boolean)
 - 404: review not found
 - 500: server/db errors