

## # Project Technology & Feature List

This document outlines the core technologies and application features based on the provided project files, with

### ### Core Technologies (The "Engine")

This is the underlying stack and tooling used to build and run your application.

\* \*\*Project Structure:\*\* Monorepo managed with **pnpm** and **Turborepo**.

\* \*\*Runtimes:\*\*

\* **Node.js**: The primary runtime for the entire project.

\* **Bun**: Used as the runtime for the dedicated backend service.

\* \*\*Languages:\*\*

\* **TypeScript**: The primary language for the entire monorepo.

\* **SQL**: Used for database functions and queries.

\* \*\*Frameworks:\*\*

\* **Next.js (v15)**: The core React framework for the main web application, using **Turborepo** (and Turbopack).

\* **Vite**: Used as the build tool for the separate 'backend' service.

\* \*\*UI & Styling:\*\*

\* **React (v19)**: The foundational UI library.

\* **Tailwind CSS**: The utility-first CSS framework for all styling.

\* **Radix UI**: Used for accessible, unstyled UI primitives (e.g., 'Dialog', 'Select', 'Dropdown').

\* **shadcn/ui Utilities**: The project uses utilities common to 'shadcn/ui' like 'class-variance-authority', 'clsx', and 'tailwind-merge'.

\* \*\*Database & Backend-as-a-Service (BaaS):\*\*

\* **Firebase**: Used as the core BaaS for database, authentication, and backend services (replacing Supabase).

\* **Prisma**: The primary ORM for database access and schema management.

\* **Firebase Cloud Functions**: Serverless functions for AI tasks, search, and other backend logic (replacing AWS Lambda).

\* \*\*Authentication:\*\* **Clerk** is the primary service for user authentication and management.

\* \*\*Payments & Monetization:\*\* **Stripe** is used for all payments, including subscriptions and creator payouts.

\* \*\*File Storage:\*\* **AWS S3** (or a compatible service like **Cloudflare R2**) is used for file and media upload.

\* \*\*AI & Embeddings:\*\* **OpenAI** client is used for AI features, including generating vector embeddings for search.

\* \*\*State Management:\*\*

\* **Jotai**: Used for global client-side state management.

\* **TanStack Query**: Used for server-side state, caching, and data fetching.

\* \*\*In-App Editors:\*\*

\* **Monaco Editor**: Provides a rich, VS Code-like text editor in the browser.

\* **CodeSandbox Sandpack**: Used to create live, runnable code sandboxes.

\* \*\*Analytics:\*\*

\* **Amplitude**: For product analytics.

\* **PostHog**: For product analytics and session recording.

\* \*\*Transactional Email:\*\* **Resend** and **React Email** are used for sending emails.

\* \*\*Testing:\*\* **Vitest** is the framework used for unit and integration tests.

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### ### Application Features (The "Experience")

This is what users can actually *do* with your application, based on the file list.

\* \*\*Component Marketplace (Core Feature):\*\*

\* **Browse Components**: Users can browse components listed on the main page, by category/collection, or search.

\* **Component Pages**: Each component has a dedicated public page showing its details and demos.

\* **Interactive Previews**: Users can view interactive component demos.

\* **User Profile Pages**: Public-facing pages that list all components and bundles published by a specific user.

\* \*\*Creator Studio & Publishing:\*\*