

# Pixel-Vault: A Feature-Rich NFT Marketplace

Pixel-Vault is a modern, full-featured NFT marketplace built with a futuristic, cyberpunk aesthetic. It provides a seamless experience for artists, collectors, and traders to discover, create, and trade digital assets on the blockchain.

## Core Features:

**Modern Frontend & UI Components:** Built with React, Vite, and Tailwind CSS, the application offers a fast and responsive user interface. It leverages the **shadcn/ui** component library, which is built on top of Radix UI, providing a rich set of accessible and composable components. This includes elements like *Cards*, *Tabs*, *Dialogs*, *Avatars*, *Buttons*, and sophisticated *Forms* that contribute to a consistent and high-quality user experience across the platform. The application also uses **Framer Motion** for fluid animations and transitions, enhancing the futuristic feel of the marketplace.

**Secure Authentication:** Leverages Supabase for secure and easy user authentication via social providers like Google and GitHub.

**Comprehensive Dashboard:** Users have a personalized dashboard to manage their NFT collections, track their portfolio value, view transaction history, and customize their profiles.

**Advanced Minting Options:** A user-friendly minting page allows creators to upload their artwork, set properties like price and royalties, and choose between direct minting (paying gas fees upfront) or lazy minting (minting on the first sale to save on gas fees).

**Dynamic Marketplace:** The marketplace homepage showcases trending collections, featured NFTs, and real-time market statistics. Users can browse, search, and filter NFTs to find the perfect digital asset.

**Detailed NFT View:** Each NFT has a dedicated page with detailed information, including properties, ownership history, and a bidding/purchasing interface.

**Blockchain Integration:** The platform is integrated with the Ethereum blockchain using ethers.js and Moralis for fetching on-chain data. NFT metadata is stored on IPFS via NFT.Storage, ensuring decentralization and permanence.

## Technology Stack:

**Frontend:** React, Vite, TypeScript, Tailwind CSS

**UI Components:** shadcn/ui, Radix UI, Lucide React

**Animation:** Framer Motion

**Backend & Database:** Supabase

**Blockchain:** Ethers.js, Moralis

**Decentralized Storage:** IPFS (via NFT.Storage)