

VonVault Telegram Mini App - Technology Stack Report

Overview

This document provides a comprehensive overview of the VonVault Telegram Mini App, including its frontend and backend technology stack, infrastructure, and integrations. This app integrates real-time financial data, self-custody crypto wallet connectivity, and Telegram-native features for seamless user experiences.

Frontend Stack

- React with TypeScript for dynamic UI
- Tailwind CSS for mobile-optimized styling
- Telegram WebApp SDK for authentication and WebView integration
- ethers.js for self-custody crypto wallet connections
- Covalent API for real-time ERC-20 balances across Ethereum, Polygon, and BSC
- Firebase Analytics for event tracking and user insights

Backend Stack

- FastAPI (Python) for RESTful API design
- Firebase Firestore for secure user and investment data storage
- Teller API for real-time banking data access
- pyjwt for secure JWT-based user authentication
- eth_account for Ethereum signature verification
- Telegram Bot API for sending user notifications

Infrastructure

- Vercel: Hosting frontend (React)
- Railway: Hosting backend (FastAPI)
- GitHub: Version control and CI/CD source

System Architecture Diagram

