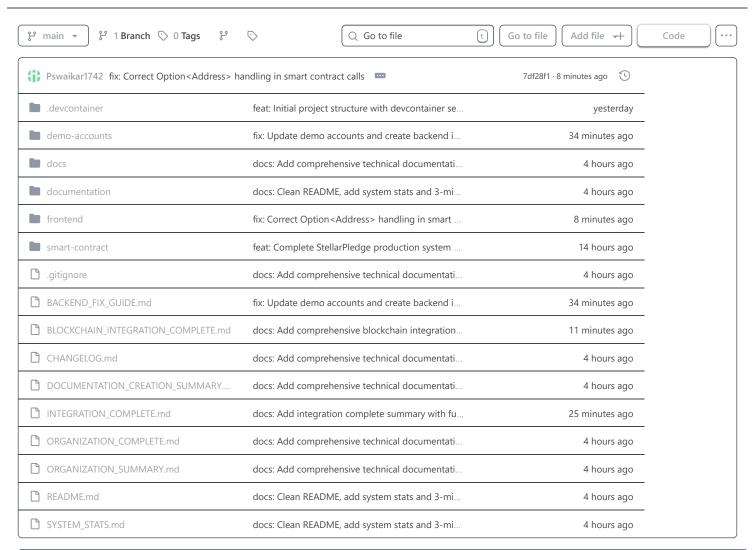


Public repository





Transform crowdfunding with automated reward distribution, trustless blockchain execution, and zero platform fees.> Transform crowdfunding with automated reward distribution, trustless blockchain execution, and zero platform fees.

Built for the Stellar Build-a-thon 🖋 Built for the Stellar Build-a-thon 🦸

******* The Problem## ******* Overview

Traditional crowdfunding platforms have:StellarPledge is a decentralized crowdfunding platform that leverages Stellar's blockchain and Soroban smart contracts to enable automated perk distribution - our core innovation that eliminates manual reward fulfillment.

- X High platform fees (5-10%)
- X Centralized control of funds### The Problem
- X Manual reward distribution (weeks/months delay)Traditional crowdfunding platforms have:
- X Limited transparency- X High platform fees (5-10%)
- X Trust-based intermediaries- X Centralized control of funds
- X Manual reward distribution (weeks/months delay)

StellarPledge is a decentralized crowdfunding platform leveraging Stellar blockchain with:### Our Solution

- ✓ Zero platform fees (only network costs ~\$0.01)- ✓ Zero platform fees (only network costs ~\$0.01)
- ✓ Decentralized smart contract escrow- ✓ Decentralized smart contract escrow
- Automatic reward distribution in real-time (Core Innovation!) Automatic reward distribution in real-time
- ✓ Complete on-chain transparency- ✓ Complete on-chain transparency
- Trustless execution

Key Features

Key Features

Standalone Wallet System

Standalone Wallet SystemNo browser extensions required!

No browser extensions required!- Create New Wallet - Generate Stellar keypair in-app

- Create New Wallet Generate Stellar keypair in-app- Import Wallet Use existing secret key (S...)
- Import Wallet Use existing secret key (S...)- Read-Only Mode Browse with public key (G...)
- Read-Only Mode Browse with public key (G...)- Secure Encryption Password-protected local storage
- Secure Encryption Password-protected local storage

**Automated Perk Distribution (Core Innovation **)

When a backer pledges enough to meet the perk threshold, the smart contract **automatically** triggers a cross-contract call to transfer reward tokens - all in ONE atomic transaction!### Why StellarPledge?**Read Standalone Wallet Documentation** \rightarrow

Example Flow:

```
Alice creates campaign:**Traditional Crowdfunding:**###  
Role-Based Access

Goal: 10,000 XLM

Perk threshold: 500 XLM → 1 FILMCREDIT token-  
High fees (5-10%)

Bob pledges 100 XLM → No perk (below threshold)-  
Manual reward fulfillment- **Creators** - Launch campaigns with custom reward tiers---

Charlie pledges 500 XLM →  
INSTANT REWARD!-  
Limited transparency

Result: TWO operations in ONE transaction:-  
Centralized control- **Funders** - Back projects and earn tokenized rewards

1. 500 XLM → Campaign escrow

2. 1 FILMCREDIT → Charlie's wallet (automatic!)
```

StellarPledge:- Multi-User Support - Independent sessions per browser tab## 🚀 The Problem

No manual fulfillment. No delays. All on-chain. Provable.

• Minimal fees (<\$0.01)

Role-Based Access

- Creators Launch campaigns with custom reward tiers- ✓ Automated rewards
- Funders Back projects and earn tokenized rewards
- Multi-User Support Independent sessions per browser tab- ✓ Complete transparency

Modern UI/UX- ☐ Decentralized trustless### ⑥ Smart Campaign ManagementTraditional crowdfunding platforms are centralized, slow, and expensive. They take significant fees and act as a trusted middleman, creating a barrier between creators and their communities. Reward distribution is manual, error-prone, and can take months.

- Responsive design (mobile, tablet, desktop)
- Dark/Light themes
- Smooth animations (Framer Motion)
- Real-time toast notifications---- Goal Setting Define funding targets in XLM
- Intuitive campaign creation wizard

→ Key Features - Deadline Management - Time-bound campaigns ---

Quick Start

Prerequisites

- Node.js 16+ and npm### For Creators- Reward Tiers Threshold-based token distribution
- Git
- **Section 2** Campaign Creation Wizard: Easy 3-step process

Installation

• 🎬 Configurable Rewards: Set threshold-based token rewards- Real-Time Progress - Live updates across all users## 🧩 Our Solution: StellarPledge Q # Clone the repository- 📊 **Real-Time Analytics**: Track pledges, backers, and progress git clone https://github.com/Pswaikar1742/StellarPledge.git cd StellarPledge- ♠ **Instant Fund Access**: Claim funds when goal is met # Install frontend dependencies- 🔐 **Secure Wallet Integration**: Create or import Stellar wallets cd frontend npm install### ¶ Automated RewardsStellarPledge is a **trustless, open-source protocol** that leverages Soroban smart contract # Start development server### For Funders npm start 🐃 - 🔍 **Campaign Discovery**: Browse active campaigns- **Token Distribution** - Automatic reward tokens <code>for</code> qualifying pledge The app will open at `http://localhost:3000`- ▼ **Reward Preview**: See eligible rewards before pledging ### First Time Setup- 🔸 **Instant Pledges**: Blockchain-fast transactions- **Threshold Logic** - Smart contract validates pled 1. **Clear browser storage** (F12 console):- 🙎 **Automatic Rewards**: Receive tokens at threshold ```javascript localStorage.clear();- Z **Portfolio Tracking**: View all backed campaigns- **Instant Delivery** - Rewards issued immediately location.reload(); 2. Create demo users:### Technical Innovation- On-Chain Proof - All transactions visible on StellarWhen a backer pledges enough to meet the perk threshold, the smart contract automatically triggers a cross-contract call to transfer reward tokens (any Stellar Classic Asset) to the backer - all in one atomic transaction! Q window.setupDemoUsers()- 🖷 **Smart Contract Automation**: Cross-contract token transfers • Event-Driven Architecture: Real-time multi-user updates 3. Login with demo accounts: o Alice (Creator): alice@example.com / alice123 - P Modern UI/UX: Tailwind CSS with Framer Motion animations ○ Bob (Funder): bob@example.com / bob123 o Charlie (Funder): charlie@example.com / charlie123 - 📕 Responsive Design: Works on all devices### 🎨 Modern UI/UXExample: Dark/Light Mode: User preference support

```
StellarPledge/
- frontend/
                            # React application- **Dark/Light Themes** - Toggle between modesAlice creates campaign:
10,000 XLM goal, 500 XLM perk threshold → 1 FILMCREDIT token reward
- src/
components/
                          # UI components## 🚀 Quick Start
  — pages/
                          # 8 main pages
  — contexts/
                          # State management- **Smooth Animations** - Framer Motion poweredBob pledges 100 XLM → No perk
(below threshold)
  - services/
                          # Wallet & Blockchain services
   utils/
                          # Helper functions### Prerequisites
  └─ package.json
|- **Toast Notifications** - Real-time feedbackCharlie pledges 500 XLM -> 🐉 INSTANT: Gets 1 FILMCREDIT automatically!
├─ smart-contract/ # Soroban smart contract
  - src/- Node.js 16+ and npm
  lib.rs # 5 core functions (213 LOC)
  └── Cargo.toml- Git```
─ documentation/
                          # 420+ pages of docs
   - demo/
                         # Demo scripts
  — technical/ # Architecture guides### Installation---
   L— guides/
                         # How-to guides
└─ SYSTEM_STATS.md
                        # Project statistics
`````bash**Result:** Two operations in ONE transaction:
---# Clone the repository

#K Technology Stackgit clone https://github.com/Pswaikar1742/StellarPledge.git##

Why StellarPledge?1. 500 XLM →
Campaign escrow
Frontendcd StellarPledge
- **Framework:** React 19.2.0
- **Styling:** Tailwind CSS + Framer Motion2. 1 FILMCREDIT → Charlie's wallet (automatic!)
- **Blockchain:** Stellar SDK 11.3.0
- **Wallet:** Standalone (AES encryption)# Install frontend dependencies
- **UI Components:** Radix UI + Lucide Icons
```

```
cd frontendTraditional crowdfunding platforms have significant limitations:
Smart Contract
- **Language:** Rustnpm install
- **SDK:** Soroban SDK 20.3.1
- **Network: ** Stellar Testnet- X High platform fees (5-10%)---
- **Functions:** 5 core contract functions
Start development server
Security
- AES-256-GCM encryption for private keysnpm start- ★ Centralized control of funds
- Password-protected keystores
- Client-side session management```
- Input validation and sanitization
- X Slow payouts (weeks/months)## ₹ Key Features
The app will open at `http://localhost:3000`
🔗 Smart Contract
- X Manual reward distribution
Deployed on Stellar Testnet:
- **Contract ID:** `CCL2RYVGR4RWLB6Q6JSMRGKIUUYLDKSJGUDCGNPMXGVDMHFLLHMTNVUH`### First Time Setup
- **Explorer:** [View on Stellar Expert]
(https://stellar.expert/explorer/testnet/contract/CCL2RYVGR4RWLB6Q6JSMRGKIUUYLDKSJGUDCGNPMXGVDMHFLLHMTNVUH)
- X Limited transparency### Decentralized Escrow
Core Functions
```rust1. **Open browser console** (F12)
create_campaign() // Create new campaign with optional perks
                 // Pledge with automatic reward distribution2. **Create demo users**:All funds are held securely on-chain
pledge()
in the Soroban smart contract. No intermediaries, no platform control.
claim_funds() // Creator claims funds after success
withdraw_refund() // Backer gets refund if campaign fails```javascript
get_campaign() // Retrieve campaign details
```window.setupDemoUsers()**StellarPledge solves these problems:**
Automated Perk Logic```
```rust
if let Some(perk) = &campaign.perk {- ☑ Zero platform fees### Instantaneous Settlements
   if total_backer_pledge >= perk.threshold {
        // Cross-contract call to Stellar Asset Contract3. **Login with demo accounts**:
```

```
let perk_token_client = token::Client::new(&env, &perk.asset_address);
              perk\_token\_client.transfer(\& campaign.creator, \& backer, \& perk.amount); - Creator: `alice@example.com` / `alice123`-linearity of the comodate of the comoda
☑ Decentralized smart contract escrowPayouts and refunds are processed in ~5 seconds via Stellar's fast consensus.
               log!("✓ Perk transferred automatically!");
       } - Funder: `bob@example.com` / `bob123`
}
        - Funder: `charlie@example.com` / `charlie123`- ☑ Instant settlements (~5 seconds)
## ≦ Live Demo---- ✓ Automated reward distribution### Micro-Pledge Capable
### Quick Demo (2 minutes)
1. Alice creates campaign: Goal 6,000 XLM, reward at 3,000 XLM
2. Bob pledges 2,000 XLM → No reward## 🏲 Project Structure- 🗹 Complete transparency on-chainNear-zero fees on the Stellar
network enable community micro-funding. Support creators with any amount.
3. Charlie pledges 4,000 XLM → Earns reward! 🎉
### Full Demo (8-9 minutes)
Follow our **[Live Demo Script](documentation/demo/LIVE_DEMO_SCRIPT.md)** for complete presentation.```
### Demo Accounts (Pre-funded Testnet)StellarPledge/
| Name | Role | Public Key | Funding |
# React application---### Automated On-Chain Perks
| **Alice** | Creator | GA4N...P5TM | 10,000 XLM |
| **Charlie** | Backer | GDBJ...H33Y | 10,000 XLM |
    — components/ # Reusable UI components**Our core innovation!** Smart contract automatically rewards backers
with custom asset tokens (collectibles, access tokens, NFTs) when they meet pledge thresholds.
**Verify on stellar.expert:** All accounts are live and funded on testnet!
— pages/
                                              # Main application pages
— context/
                                              # React Context providers## 🚀 Quick Start
## 🖣 Documentation
├── services/
                                              # Stellar/Wallet services
### 🖆 Demo & Presentation
- **[Live Demo Script](documentation/demo/LIVE_DEMO_SCRIPT.md)** 🍁 - 8-9 minute presentation script | — utils/
# Helper functions### Three Perk Modes
- **[3-Minute Pitch](documentation/demo/3_MINUTE_PITCH.md)** - Quick pitch for judges
```

```
Configuration constants
- **[Pre-Demo Checklist](documentation/demo/PRE DEMO CHECKLIST.md)** - Setup before presentation
| __ public/
                     # Static assets### Prerequisites- **Automatic:** Smart contract handles distribution
(recommended)
### \ Technical Documentation
- **[System Architecture](documentation/technical/SYSTEM_ARCHITECTURE.md)** - Complete system design
- **[Smart Contract Architecture](documentation/technical/SMART_CONTRACT_ARCHITECTURE.md)** - Rust contract deep dive
- **[Wallet System](documentation/technical/WALLET_SYSTEM_ARCHITECTURE.md)** - Wallet implementation - smart-contract/
# Soroban smart contract- Node.js v16+ and npm- **Manual:** Creator distributes rewards later
- **[Frontend Architecture](documentation/technical/FRONTEND_ARCHITECTURE.md)** - React app structure
- **[Stellar Expert Guide](documentation/technical/STELLAR_EXPERT_GUIDE.md)** - Blockchain verification - src/
### 🛄 Guides | Lib.rs # Main contract code- Modern web browser (Chrome, Firefox, Edge, Safari)- **No
Perks:** Simple crowdfunding only
- **[Demonstration Q&A](documentation/guides/DEMONSTRATION_QA.md)** - 27 technical questions
dependencies
- **[Real Accounts Guide](documentation/guides/REAL FUNDED ACCOUNTS GUIDE.md)** - Using testnet accounts
### 📊 Project Metrics
- **[System Stats](SYSTEM_STATS.md)** - Complete project statistics — documentation/ # All documentation
--- demo/ # Demo scripts and guides### Installation### Transparent & Trustless
## ⊕ Use Cases  
├─ technical / # Technical documentation
### 🞬 Film Production | — guides/ # User guides- Every transaction viewable on Stellar Expert
**Campaign:** Fund indie film (5,000 XLM goal)
### 🎜 Music Album 📉 bash- Open-source smart contract code
**Campaign:** Record album (2,000 XLM goal)
**Perk:** Exclusive track token at 500 XLM pledge — demo-accounts/ # Funded testnet accounts
### 🙇 Game Development | — Alice.txt# Clone the repository- No platform fees
**Campaign:** Build indie game (10,000 XLM goal)
```

- **[Complete Demo Guide](documentation/demo/COMPLETE_DEMO_GUIDE.md)** - Full walkthrough

```
### 🖣 Book Publishing | — Charlie.txtgit clone https://github.com/Pswaikar1742/StellarPledge.git- Provable on-chain
ownership
**Campaign:** Publish novel (1,000 XLM goal)
**Perk:** Signed digital copy at 200 XLM pledge
--- README.md # This filecd StellarPledge
## P Key Innovations```
### 1. Automated On-Chain Perks 🚖---
First crowdfunding platform with **instant, automatic** reward distribution via cross-contract calls.
### 2. Standalone Wallet System
No browser extensions needed - complete wallet management built into the app.# Install frontend dependencies
### 3. Threshold-Based Incentives## | Documentation
Smart contract validates pledge amounts and triggers rewards automatically.
cd frontend## * Technology Stack
### 4. Any Stellar Asset as Reward
Support for any token: NFTs, access tokens, collectibles, memberships.### 🞬 Demo & Presentation
---- **[Live Demo Script](documentation/demo/LIVE_DEMO_SCRIPT.md)** 🛊 - Copy/paste ready presentation (8-9 min)npm install
## 📊 Project Status- **[Complete Demo Guide](documentation/demo/COMPLETE_DEMO_GUIDE.md)** - Full walkthrough with
verification
```- **[Pre-Demo Checklist](documentation/demo/PRE_DEMO_CHECKLIST.md)** - Setup before presentation- **Blockchain:** Stellar
Testnet (Soroban)
✓ Smart Contract: 100% Complete (Deployed on testnet)
☑ Standalone Wallet: 100% Complete (3 connection modes)- **[Demo Changes](documentation/demo/DEMO_CHANGES.md)** - Recent
updates
 100% Complete (8 pages, 16+ components)
✓ Frontend UI:
☑ Documentation:
 100% Complete (420+ pages)# Start development server- **Smart Contract:** Rust + Soroban SDK 20.5.0
✓ Demo Accounts:
 100% Complete (3 funded accounts)
 100% Complete (Manual testing)### 📏 Technical Documentation
✓ System Testing:
```

• <u>Current State Explanation</u> - Mock vs Real blockchainnpm start- Frontend: React 19.2.0

Status: PRODUCTION READY for demonstration

- Wallet Balance Guide Balance system architecture
- Real Accounts Integration Testnet integration "- Wallet: Standalone wallet system (no extensions required)

### Quick Links

- Repository: github.com/Pswaikar1742/StellarPledge
- Smart Contract: View on Stellar Expert### 🔲 User Guides- SDK: Stellar SDK 11.3.0
- Demo Accounts:
  - o Alice (Creator) Real Funded Accounts Guide Using testnet accounts
  - Bob (Backer)
  - <u>Charlie (Backer)</u>- <u>Testing Guide</u> Manual testing instructionsThe application will open at: \*\*<u>http://localhost:3000\*\*-</u> <u>Security</u>: AES encryption, password-protected keystores

## 

Team of 3 passionate blockchain developers building the future of creator economy on Stellar!- Final Delivery Summary - Complete project overview

Q

Built for the Stellar Build-a-thon with ♥### First-Time Setup### Smart Contract Architecture

### License

MIT License - See <u>LICENSE</u> file for details## 🖀 Demo

- ---1. Clear Browser Storage (Press F12 to open console):""rust
- StellarPledge: Where Creators Meet Their Community On-Chain #### Quick Demo (2 minutes)

Last Updated: October 26, 2025 | Version: 1.0.0 | Status: Demo Ready```javascript// Automated perk distribution logic

- 1. Start server: npm start in /frontend
- $2. \ Setup: \ window.setupDemoUsers() \ in \ consolelocalStorage.clear(); if let \ Some(perk) = \& campaign.perk \ \{ (a) \ (b) \ (b) \ (c) \ (c$
- 3. Alice creates campaign: Goal 6,000 XLM, reward at 3,000 XLM
- 4. Bob pledges 2,000 XLM: No rewardlocation.reload(); if total\_backer\_pledge >= perk.threshold {
- 5. Charlie pledges 4,000 XLM: Earns reward! 🎉

```
- React 18, Tailwind CSS, Framer Motion```}
- React Router, Lucide Icons
- @stellar/stellar-sdk```
Smart ContractThis creates three test accounts:
- Rust, Soroban SDK
- Stellar Testnet- **Alice** (Creator): `alice@example.com` / `alice123`**Key Innovation:** Cross-contract calls enable
automatic token transfers without manual intervention.
Tools- **Bob** (Funder): `bob@example.com` / `bob123`
- Node.js, npm, Webpack, ESLint
- **Charlie** (Funder): `charlie@example.com` / `charlie123`---
🔗 Smart Contract
---## Live Demo
Features
- ✓ Campaign creation with parameters
- ✓ Pledge with automatic reward distribution
- ☑ Threshold-based incentives## 🛄 Complete Demo Guide**Deployed Smart Contract:**
- ☑ Refund mechanism
- ✓ Fund claiming- Network: Stellar Testnet
Key Functions### **See COMPLETE_DEMO_GUIDE.md for full demonstration instructions**- Address:
`CD4L4MPVSJ3RLAUYQ3ID2M75VWVVMDFBTESJIY4UULFFN33X2KNRTJXY`
```rust
create_campaign() // Create new campaign- Explorer: [View on Stellar Expert]
(https://stellar.expert/explorer/testnet/contract/CD4L4MPVSJ3RLAUYQ3ID2M75VWVVMDFBTESJIY4UULFFN33X2KNRTJXY)
pledge()
                // Pledge with auto rewards
claim_funds() // Claim after successQuick demo flow (8-9 minutes):
withdraw_refund() // Refund if failed
```1. **Alice** creates campaign (6000 XLM goal, 3000 XLM reward tier)**Frontend Application:**
Status2. **Bob** pledges 2000 XLM (below threshold, no reward)- URL: `https://localhost:3000` (local dev)
- 🦻 Code: Complete
- 🖸 Deployment: Ready for testnet3. **Charlie** pledges 4000 XLM (above threshold, earns FOUNDER token)- Status: Standalone
wallet 100% complete, campaign UI in development
```

### Frontend

- ↑ Location: `/smart-contract/src/lib.rs`

```
4. Campaign reaches goal → Alice sees "Pending Approval" status
Demo Flow (5 Minutes)
👺 Demo Accounts
| Name | Role | Email | Password |
|-----|-----|1. **Alice (Creator)** creates campaign: 10,000 XLM goal, 500 XLM perk threshold
| Alice | Creator | alice@example.com | alice123 |
| Bob | Funder | bob@example.com | bob123 | ## 🗜 Architecture2. **Bob (Student)** pledges 100 XLM → No perk (below
threshold)
| Charlie | Funder | charlie@example.com | charlie123 |
Setup: `window.setupDemoUsers()` in console
Tech Stack4. View on Stellar Expert: Two operations in one transaction
- **Frontend:** React 18, Tailwind CSS, Framer Motion5. Alice claims 600 XLM when goal met
📞 Quick Links
- **Blockchain:** Stellar Network (Testnet)
- **Repository**: github.com/Pswaikar1742/StellarPledge
- **Demo Script**: [LIVE_DEMO_SCRIPT.md](documentation/demo/LIVE_DEMO_SCRIPT.md)- **Smart Contract:** Rust + Soroban SDK**Wow
Factor:** Live cross-contract call with on-chain proof!
- **Documentation**: [/documentation](documentation/)
- **Wallet:** Custom wallet system with AES encryption
- **State Management:** React Context + Custom Hooks---
🌞 Highlights
- **Routing:** React Router v6
- Automated threshold-based rewards
-

✓ Complete full-stack implementation##

✓ Quick Start
- ♥ Production-quality code and UI
- ■ Comprehensive documentation### Project Structure
- Facted demo flow
- ⊘ Stellar blockchain native```### Prerequisites
---StellarPledge/
Built with ♥ for the Stellar ecosystem ├── frontend/
 # React application- **Node.js** (v16+) and npm
```

```
([Get from Friendbot](https://laboratory.stellar.org/#account-creator?network=test))
 — components/
 # UI components- **No wallet extension required** - Built-in standalone wallet system
 - ui/
 # Reusable UI primitives
 └── Wallet/
 # Wallet management### Installation
 - context/
 # Global state
 - pages/
 # Route pages```bash
 - services/
 # API services# Clone the repository
 — utils/
 # Helper functionsgit clone https://github.com/Pswaikar1742/StellarPledge.git
 │ └─ App.js
 # Main app componentcd StellarPledge
 └─ package.json
- smart-contract/
 # Soroban smart contract# Install frontend dependencies
 - src/cd frontend
 └─ lib.rs
 # Contract logicnpm install
 └─ Cargo.toml
├─ COMPLETE DEMO GUIDE.md # Full demonstration guide# Start the development server (HTTPS required for Freighter)
├── PRE_DEMO_CHECKLIST.md # Pre-presentation checklistnpm start
── WALLET_BALANCE_GUIDE.md
 # Balance system docs```
└── README.md
 # This file
```The application will open at: **https://localhost:3000**
---### Connect Your Wallet
## P Key Features in DetailChoose one of three connection modes:
### Wallet System1. **Create New Wallet** - Generate a new Stellar keypair
- **3 Connection Modes:** Create, Import, Read-Only2. **Import Existing Wallet** - Import using your secret key (S...)
- **Password Protection:** AES encryption for secret keys3. **Connect Read-Only** - View campaigns using public key (G...)
- **Mock Balances: ** 10,000 XLM initial balance for testing
- **Real-Time Updates:** Balance changes reflect immediately### Build Smart Contract
### Campaign Management```bash
- **3-Step Creation Wizard:**cd smart-contract
 1. Basic Info (Title, Description)cargo build --target wasm32-unknown-unknown --release
 Funding Goal (Amount, Duration)
```

3. Reward Tier (Threshold, Token details)# Optimize (optional)

```
soroban contract optimize --wasm target/wasm32-unknown-unknown/release/stellar_pledge_contract.wasm
- **Status Tracking:**```
 - Active: Currently accepting pledges
 - Pending Approval: Goal reached, awaiting creator action---
 - Successful: Funds claimed by creator
 - Failed: Goal not met, refunds available## 📋 Project Structure
### Pledge System```
- **Real-Time Validation:** Check balance before pledgeStellarPledge/
- **Threshold Preview:** See if you'll earn rewards — README.md # This file
                                                                # Complete documentation
- **Instant Confirmation:** Toast notifications with details ├─ docs/
- **Balance Updates:** Immediate deduction from wallet | — COMPLETE-WORKFLOW.md # Step-by-step user journeys
── IMPLEMENTATION-SUMMARY.md # Technical implementation details
### Multi-User Support | PROJECT-STATUS.md # Current status & roadmap
- **Independent Sessions:** Each tab maintains separate user UUICK-REFERENCE.md # Quick start guide
- **Event-Based Sync:** Real-time updates across components — demo-accounts/ # Demo account details
│ ├─ Bob.txt # Small backer
---| — Charlie.txt # High backer
igg|— smart-contract/ # Soroban smart contract
## 🙇 User Journeys | — Cargo.toml
└─ src/
### Creator Journey (Alice)| Lab.rs # Automated perk distribution logic
1. Register/Login \rightarrow Select "Create Campaign" role — frontend/ # React application
2. Connect wallet → Initial 10,000 XLM ├── src/
3. Create campaign with reward tier │ ├── components/ # UI components
4. Monitor pledge progress | — context/ # State management
5. Claim funds when goal reached \hspace{0.1cm}|\hspace{0.1cm}-\hspace{0.1cm} hooks/ \hspace{0.1cm} # Custom React hooks
  — utils/ # Error handling, validation
### Funder Journey (Bob/Charlie) | — constants/ # Configuration
1. Register/Login \rightarrow Select "Fund Projects" role \cupe - INTEGRATION-GUIDE.md # Frontend API documentation
2. Connect wallet → Initial 10,000 XLM  
— package.json
3. Browse active campaigns```
4. View campaign details
5. Make pledge → Earn rewards if qualifying---
6. View backed campaigns in dashboard
```

```
### For Creators
## 🛠 Development
### For Creators
### Available Scripts
**Setup (One-Time)**
```bash1. Install Freighter wallet \rightarrow Switch to Testnet
Start development server2. Create your custom perk token (e.g., FILMCREDIT)
npm start3. Deploy asset contract to Stellar
Build for production**Launch Campaign**
npm run build1. Visit StellarPledge → Connect wallet
2. Click "Create Campaign"
Run tests3. Set goal, deadline, and optional perk threshold
npm test4. Choose perk mode: Automatic, Manual, or None
5. Approve transaction → Campaign goes live!
Eject configuration (one-way operation)
npm run eject**Outcome**
```- ☑ **Success:** Claim all funds when goal met
- X **Failed:** Backers get automatic refunds
### Debug Commands
### For Backers
Open browser console (F12) and use:
**Browse & Pledge**
```javascript1. Install Freighter → Switch to Testnet
// Check current user2. Browse active campaigns
window.whoAmI()3. Select campaign → Enter pledge amount
4. See perk preview if you qualify
// View all campaigns5. Approve transaction → Done!
window.viewCampaigns()
Automated Perks
// View all users- Pledge ≥ threshold → Get perk token instantly
window.viewUsers()- All in one atomic transaction
- On-chain proof of ownership
// Check wallet balances
window.walletBalance.getAll()**Refunds**
```

## 🞮 How It Works

### Film Production

--- Campaign: Fund indie film

Perk: Early screening ticket NFT at 1000 XLM

### Documentation

- Music Albums
- COMPLETE\_DEMO\_GUIDE.md Full demonstration guide with step-by-step instructionsCampaign: Record new album
- PRE\_DEMO\_CHECKLIST.md Pre-presentation checklist and troubleshootingPerk: Exclusive track token at 500 XLM
- WALLET\_BALANCE\_GUIDE.md Mock wallet balance system documentation
- DEMO\_GUIDE.md Quick reference guide### 🙇 Game Development
- DEMO\_CHANGES.md Technical implementation detailsCampaign: Build indie game

Perk: In-game currency at 2000 XLM

## Book Publishing

# **©** Use CasesCampaign: Publish novel

Perk: Signed digital copy at 200 XLM

### Film Production

Launch campaigns to fund indie films with premiere ticket NFTs as rewards---

### ■ Music Albums## ■ Security Features

Raise funds for album recording with exclusive track tokens

- Smart Contract Escrow Funds locked until goal met
- Game Development- Freighter Integration No private keys in browser

Build indie games with in-game currency as backer rewards- 🗹 Transaction Simulation - Preview before signing

- **Automatic Refunds** Failed campaigns return funds
- Book Publishing- TESTNET Enforcement Demo safety guaranteed

Fund book publication with signed digital copy tokens- 🗹 Comprehensive Error Handling - 15+ scenarios covered

Part Projects A Note: This is a testnet demonstration. Production deployment requires security audit.

Q

Support artists with limited edition digital collectibles

## Project Status

# Security

```
Current Implementation (Demo/Testnet) ☑ Smart Contract: 100% Complete (Deployed)
- ☑ Password-protected wallet encryption ☑ Standalone Wallet: 100% Complete (3 connection modes)
- ☑ Client-side session management☑ Backend Logic:
 100% Complete
- ☑ localStorage data persistence☑ Error Handling:
 100% Complete
- ✓ Input validation and sanitization ✓ Documentation:
 100% Complete (Professional)
 In Development
- ☑ Balance validation before transactions ☒ Campaign UI:
 Pending asset creation
Demo Testing:
Production Considerations```
- 🔒 Backend authentication server required
- 🕯 JWT token-based sessions**Current Phase:** Standalone wallet complete, campaign UI implementation in progress
- 🕯 Smart contract security audit
- Rate limiting and DDoS protection---
- 🔒 HTTPS enforcement
- 🔒 Password hashing (bcrypt/argon2)## 🖣 Documentation
** 🛦 Note:** This is a testnet demonstration. Do NOT use real funds or deploy to mainnet without proper security audit.All
comprehensive documentation is in the `/docs` folder:
---- **[COMPLETE-WORKFLOW.md](docs/COMPLETE-WORKFLOW.md)** - Step-by-step user journeys for Alice, Bob, and Charlie
- **[IMPLEMENTATION-SUMMARY.md](docs/IMPLEMENTATION-SUMMARY.md)** - Technical implementation details and testing
🐪 Troubleshooting- **[PROJECT-STATUS.md](docs/PROJECT-STATUS.md)** - Current status, metrics, and roadmap
- **[QUICK-REFERENCE.md](docs/QUICK-REFERENCE.md)** - Quick commands and links
Common Issues
Frontend Integration:
Issue: Balance shows 0 XLM- **frontend/INTEGRATION-GUIDE.md** - Complete API
documentation for developers
```javascript
// Solution: Initialize balance manually---
window.walletBalance.init("YOUR_PUBLIC_KEY", 10000)
```

```
Built for the Stellar Build-a-thon!
Issue: User not showing in header
 // Solution: Check current user1. Fork the repository
 window.whoAmI()2. Create a feature branch
 // If null, login again3. Make your changes
 ```4. Submit a pull request
 Issue: Campaign not updating---
 ```javascript
 // Solution: Refresh or check campaigns## 🖹 License
 window.viewCampaigns()
 location.reload()MIT License - See LICENSE file for details
Issue: Compilation errors
 # Clear cache and restart
 rm -rf node_modules/.cache- **Repository:** [GitHub - StellarPledge](https://github.com/Pswaikar1742/StellarPledge)
 npm start- **Smart Contract:** [View on Stellar Expert]
  (https://stellar.expert/explorer/testnet/contract/CD4L4MPVSJ3RLAUYQ3ID2M75VWVVMDFBTESJIY4UULFFN33X2KNRTJXY)
  ```- **Stellar Documentation:** [Soroban Docs](https://soroban.stellar.org/)
 - **Freighter Wallet:** [freighter.app](https://www.freighter.app/)
 ## 📊 Project Status
 ## 1 Team
 Complete:
 - Multi-user authentication systemPassionate blockchain developers building the future of creator economy on Stellar!
 - Role-based access control
 - Wallet integration (Create/Import/Read-Only)---
 - Campaign creation wizard
 - Pledge functionality with rewards**♥ StellarPledge: Where Creators Meet Their Community On-Chain ❤**
 - Mock balance system
 - Real-time updates across tabs*Last Updated: October 25, 2025*
```

- Complete documentation

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```
📱 **Future Enhancements:** - Add the [Freighter extension](https://www.freighter.app/) to your browser
- Smart contract integration - Create or import a wallet
- Backend API for production - Switch to **Testnet** network in Freighter settings
- Campaign approval/decline flow
- Refund mechanism2. **Fund Your Account:**
- Transaction history - Go to [Stellar Laboratory](https://laboratory.stellar.org/#account-creator?network=test)
- Email notifications - Click "Generate keypair" → "Fund account with Friendbot"
- Social sharing features - You'll receive 10,000 XLM testnet tokens
 - Repeat for 2-3 accounts (Alice, Bob, Charlie)
Demo: Automated Perk Distribution
Contributing
Step 1: Create FILMCREDIT Asset (Alice)
Built for the **Stellar Build-a-thon**!
```bash
Contributions welcome:# Create a custom Stellar asset for perk rewards
1. Fork the repository# Note: This will be integrated into the UI in production
2. Create a feature branch (`git checkout -b feature/amazing-feature`)```
3. Commit your changes (`git commit -m 'Add amazing feature'`)
4. Push to the branch (`git push origin feature/amazing-feature`)#### Step 2: Alice Creates Campaign with Perk
5. Open a Pull Request
1. Open **https://localhost:3001**
---2. Click **"Connect Wallet"** → Approve in Freighter
3. Navigate to **"Create Campaign"**
## 🖹 License4. Fill in:
  - **Goal:** 1000 XLM
This project is licensed under the MIT License - see the [LICENSE](LICENSE) file for details. - **Deadline:** 24 hours
  - **Enable Perk:** ✓
--- - **Perk Threshold:** 500 XLM
   - **Reward Token:** FILMCREDIT contract address
##  Links - **Reward Amount:** 1 token
5. Click **"Create"** → Sign transaction in Freighter
- **GitHub Repository:** [StellarPledge](https://github.com/Pswaikar1742/StellarPledge)
- **Stellar Network:** [stellar.org](https://stellar.org)#### Step 3: Bob Pledges (No Perk)
- **Soroban Documentation:** [soroban.stellar.org](https://soroban.stellar.org)
```

1. **Install Freighter Wallet:**

```
1. Disconnect Alice's wallet
 ---2. Connect **Bob's wallet** via Freighter
 3. Click on Alice's campaign
 ## 1 Team4. Pledge **100 XLM**
 5. Sign transaction
 Passionate blockchain developers building the future of decentralized crowdfunding!6. **Result:** Campaign shows 100/1000 XLM
 (10% funded) - No perk transferred
 ---#### Step 4: Charlie Pledges (Perk Triggered! 🞉)
 ## 🎉 Acknowledgments1. Disconnect Bob's wallet
 2. Connect **Charlie's wallet** via Freighter
 - Built on [Stellar](https://stellar.org) blockchain3. Click on Alice's campaign
 - UI components inspired by [shadcn/ui](https://ui.shadcn.com)4. Pledge **500 XLM**
 - Animations powered by [Framer Motion](https://www.framer.com/motion)5. Sign transaction
 - Icons from [Lucide React](https://lucide.dev)6. **Magic Happens:** Two transfers in ONE transaction:
    - ✓ 500 XLM → Campaign escrow
 --- - ✓ 1 FILMCREDIT → Charlie (automatic!)
 ** 🌣 StellarPledge: Empowering Creators, Connecting Communities 🌞 **#### Step 5: Verify on Block Explorer
 *Last Updated: October 26, 2025*```
 Visit: https://stellar.expert/explorer/testnet/tx/[TRANSACTION_HASH]
 You'll see TWO operations:
 1. XLM payment: Charlie → Contract
 2. FILMCREDIT transfer: Alice → Charlie (automated by contract!)
Step 6: Alice Claims Funds
 1. Campaign now shows 600/1000 XLM (60% funded, SUCCESSFUL)
 2. Connect Alice's wallet
 3. Click "Claim Funds"
 4. Alice receives 600 XLM (Bob's 100 + Charlie's 500)
```

O Deployed Smart Contract

• Network: Stellar Testnet

• Contract Address: CD4L4MPVSJ3RLAUYQ3ID2M75VWVVMDFBTESJIY4UULFFN33X2KNRTJXY

• Explorer: View on Stellar Expert

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Core Functions

```
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 // Create a new campaign with optional perk
 create campaign(
     creator: Address,
     goal: u128,
     deadline: u64,
     perk: Option<PerkConfig> // NEW: Automated perk system
 // Pledge to a campaign (automatic perk check)
     campaign_id: u32,
     backer: Address,
     amount: u128
 // Creator claims funds from successful campaign
 claim_funds(campaign_id: u32, creator: Address)
 // Backer withdraws refund from failed campaign
 withdraw_refund(campaign_id: u32, backer: Address)
 // Get campaign details
 get_campaign(campaign_id: u32) -> Campaign
PerkConfig Structure
                                                                                                                               O
 pub struct PerkConfig {
     pub threshold: u128,
                               // Minimum pledge to qualify
     pub asset_address: Address, // Stellar Asset Contract address
     pub amount: i128,
                              // Reward amount (in stroops)
Automated Perk Logic
                                                                                                                               Q
 // Inside pledge() function
 if let Some(perk) = &campaign.perk {
     if total_backer_pledge >= perk.threshold {
         // Cross-contract call to Stellar Asset Contract
         let perk_token_client = token::Client::new(&env, &perk.asset_address);
         perk_token_client.transfer(&campaign.creator, &backer, &perk.amount);
         log!(&env, "✓ Perk transferred automatically!");
Frontend Integration
```

Custom React Hooks (Complete Backend API)

The frontend provides 10+ custom hooks for easy integration:

```
// Wallet Management
const { publicKey, connectWallet, disconnectWallet } = useWallet();

// Campaign Operations
const { create, isCreating } = useCreateCampaign();
const { makePledge, isPledging } = usePledge();
const { handleClaimFunds } = useClaimFunds();

// Data Queries
```

```
const { campaigns, loading } = useCampaignList();
const { campaign } = useCampaignDetail(campaignId);
const { percentage, remaining } = useCampaignProgress(campaign);

// Perk Features
const { qualifies, perkInfo } = usePerkCheck(campaign, pledgeAmount);
const isCreator = useIsCreator(campaign);

// User Data
const { myCampaigns } = useMyCampaigns();
const { myPledges } = useMyPledges();
```

Complete Documentation

See /frontend/INTEGRATION-GUIDE.md for:

- Complete hook documentation
- **D**ata type definitions
- Code examples
- Z Error handling patterns

% Development

Build Smart Contract

```
cd smart-contract
cargo build --target wasm32-unknown-unknown --release
soroban contract optimize --wasm target/wasm32-unknown-unknown/release/stellar_pledge_contract.wasm
```

Deploy to Testnet

Deploy contract

soroban contract deploy $\$

--wasm target/wasm32-unknown/release/stellar_pledge_contract.wasm \

- --source-account <YOUR_SECRET_KEY> \
- --rpc-url https://soroban-testnet.stellar.org \
- --network-passphrase "Test SDF Network ; September 2015" $\,$

Run Frontend Dev Server

```
cd frontend
npm start # Starts HTTPS server on port 3001
```

© Key Innovations

1. Automated Perk Distribution 🌟

Traditional crowdfunding: Creator manually sends rewards weeks/months later StellarPledge: Instant, automatic token transfer when threshold met

2. Cross-Contract Calls

Smart contract interacts with Stellar Asset Contract to transfer tokens:

```
let perk_token_client = token::Client::new(&env, &perk.asset_address);
```

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3. Any Stellar Asset as Reward

- Movie premiere tickets (FILMCREDIT)
- Music album NFTs (ALBUM001)
- Game currency (GAMECOIN)
- Exclusive memberships (VIPPASS)

4. Production-Ready Architecture

- Clean separation: Smart contract ↔ Soroban.js ↔ React Contexts ↔ Custom Hooks
- Modular, testable, maintainable
- TypeScript-ready data structures
- Comprehensive error handling

Security Features

- Variable Freighter Wallet Integration No private keys in browser
- **Transaction Simulation** Preview before signing
- Smart Contract Escrow Funds locked until goal met
- Automatic Refunds Failed campaigns return funds
- **Z** Time-Based Logic Deadline enforcement on-chain
- ✓ State Validation Prevent double-claims/withdrawals

🛕 Testnet Note: This is a demonstration on Stellar Testnet. For production deployment, conduct thorough security audits.

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Project Status

✓ Smart Contract: 100% Complete (Deployed)

☑ Backend Logic: 100% Complete

✓ Wallet Integration: 100% Complete (Freighter) ✓ State Management: 100% Complete (React Context)

✓ Custom Hooks: 100% Complete (10+ hooks)
✓ Documentation: 100% Complete
✓ U.T. Components: In Document

Hackathon Presentation

5-Minute Demo Script

Minute 1: Introduction

- "StellarPledge automates creator rewards using Stellar blockchain"
- Show the problem: Manual reward distribution is slow and error-prone

Minute 2: The Innovation

- Explain cross-contract calls to Stellar Asset Contract
- Show the code: Automatic perk transfer logic

Minute 3: Live Demo - Campaign Creation

• Alice creates campaign with 500 XLM perk threshold

• Show perk configuration UI

Minute 4: Live Demo - Automatic Perk

- Bob pledges 100 XLM (no perk)
- Charlie pledges 500 XLM (perk triggers!)
- Show block explorer: Two transfers in one transaction

Minute 5: Impact & Future

- Creator economy enabler: Musicians, filmmakers, game developers
- Any Stellar asset as reward
- Zero trust required all automated on-chain

Use Cases

Film Production

- Campaign: Fund indie film with 5000 XLM goal
- Perk: Early screening ticket NFT at 1000 XLM pledge

Music Album

- Campaign: Record album with 2000 XLM goal
- Perk: Exclusive track token at 500 XLM pledge

Game Development

- Campaign: Build game with 10000 XLM goal
- Perk: In-game currency at 2000 XLM pledge

Book Publishing

- Campaign: Publish book with 1000 XLM goal
- Perk: Signed digital copy at 200 XLM pledge

22 Contributing

Built for the Stellar Build-a-thon by passionate blockchain developers!

Want to contribute?

- 1. Fork the repository
- 2. Create a feature branch
- 3. Make your changes
- 4. Submit a pull request

License

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Links

- Repository: <u>GitHub StellarPledge</u>
- Smart Contract Explorer: View on Stellar Expert

- Stellar Documentation: Soroban Docs
- Freighter Wallet: freighter.app
- Building the Future of Creator Economy on Stellar *

Last Updated: October 25, 2025

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 Rust 3.7%
 CSS 2.0%
 HTML 0.7% Suggested workflows Based on your tech stack Grunt **3** Configure Build a NodeJS project with npm and grunt. Publish Node.js Package Configure Publishes a Node.js package to npm. Node.js Configure Build and test a Node.js project with npm.

More workflows Dismiss suggestions