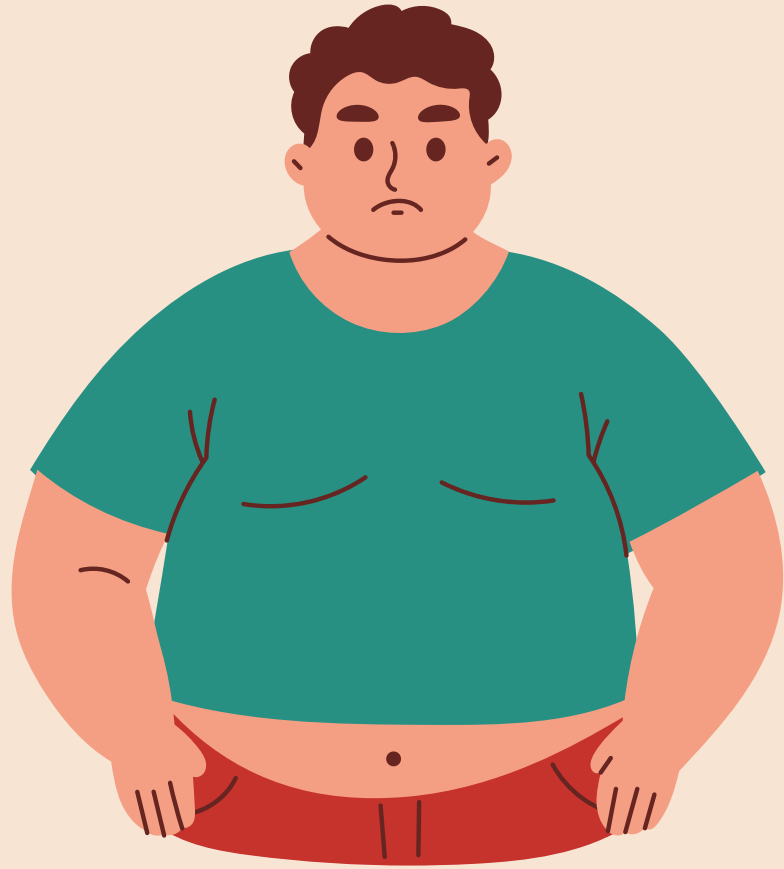


 CashFit.ai



Staying consistent with fitness is often a battle against **procrastination**, loss of **motivation**, and lack of **immediate rewards**. Despite the best intentions, people frequently **skip workouts** because there's **no immediate financial reward** for showing up — and no real **penalty for slacking off**.



What if every completed workout could **earn you real money**, and skipping meant **losing your staked funds**? A system where consistency is rewarded with **actual cash payouts** and laziness results in **losing your investment** taps directly into **human psychology** — creating powerful incentives for discipline and daily action.



**CashFit.ai** is an innovative AI-driven fitness platform that empowers users to earn rewards by completing fitness challenges verified through AI form detection, human consensus, and blockchain-based cryptographic proofs — all while maintaining privacy, transparency, and fairness via a public blockchain ledger.



It introduces this game-changing behavioral model by combining AI-verified workouts, human validation, blockchain transparency, and a money-stake system — making fitness a truly accountable, high-reward, and high-stakes journey where you genuinely **earn while you burn.**

## Stake & Earn

Commit money to challenges and earn more when you complete them. Financial incentives that keep you motivated and committed to your fitness journey.



## AI Form Check

Our AI tracks your movements in real-time, ensuring proper exercise form, preventing injuries and guaranteeing effective workouts every time.



# Blockchain Verification

Every workout is secured on a blockchain-like structure with zero-knowledge proofs to ensure privacy while maintaining complete transparency.





# Community Challenges

Join group challenges or create your own to compete with friends. Community participation increases motivation and accountability.



## Dual Verification

Every workout is verified by both AI and human reviewers, creating a trustless system that ensures fairness and accuracy in all challenges.



# Smart Contracts

Challenge funds are secured through smart contracts that automatically distribute rewards based on completion criteria without intermediaries.



# Zero-Knowledge Proofs

Our platform uses ZK technology to verify workout completion while preserving your privacy, allowing you to prove workout performance without revealing personal details.



# Public Ledger

Access our transparent public verification ledger to audit workout data, challenges, and earnings while maintaining user privacy through cryptographic hashing.



## Verify & Earn

Spend your free time verifying others' workout submissions and earn instant rewards, while helping ensure accuracy, fairness, and trust across the platform.



# Our Workout Verification System

CashFit.ai utilizes zero-knowledge proofs (ZKP) to verify workout performance without revealing sensitive user information. This cryptographic technology allows users to prove they've completed exercises according to the required standards without exposing user's face, the actual workout video or any personal identifiable information.



## Privacy Preservation

Zero-knowledge proofs allow users to maintain their privacy while still proving workout completion. Only cryptographic hashes and verification data are stored on the public ledger, not actual workout footage.





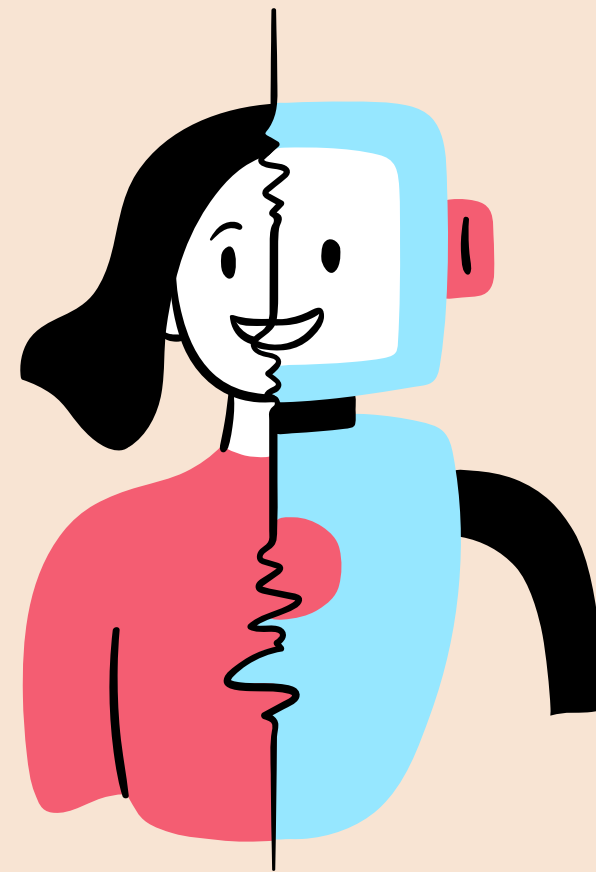
## Immutable Verification

Each workout verification is recorded using a blockchain-like structure, making it tamper-proof and auditable by any user in the system without compromising privacy.

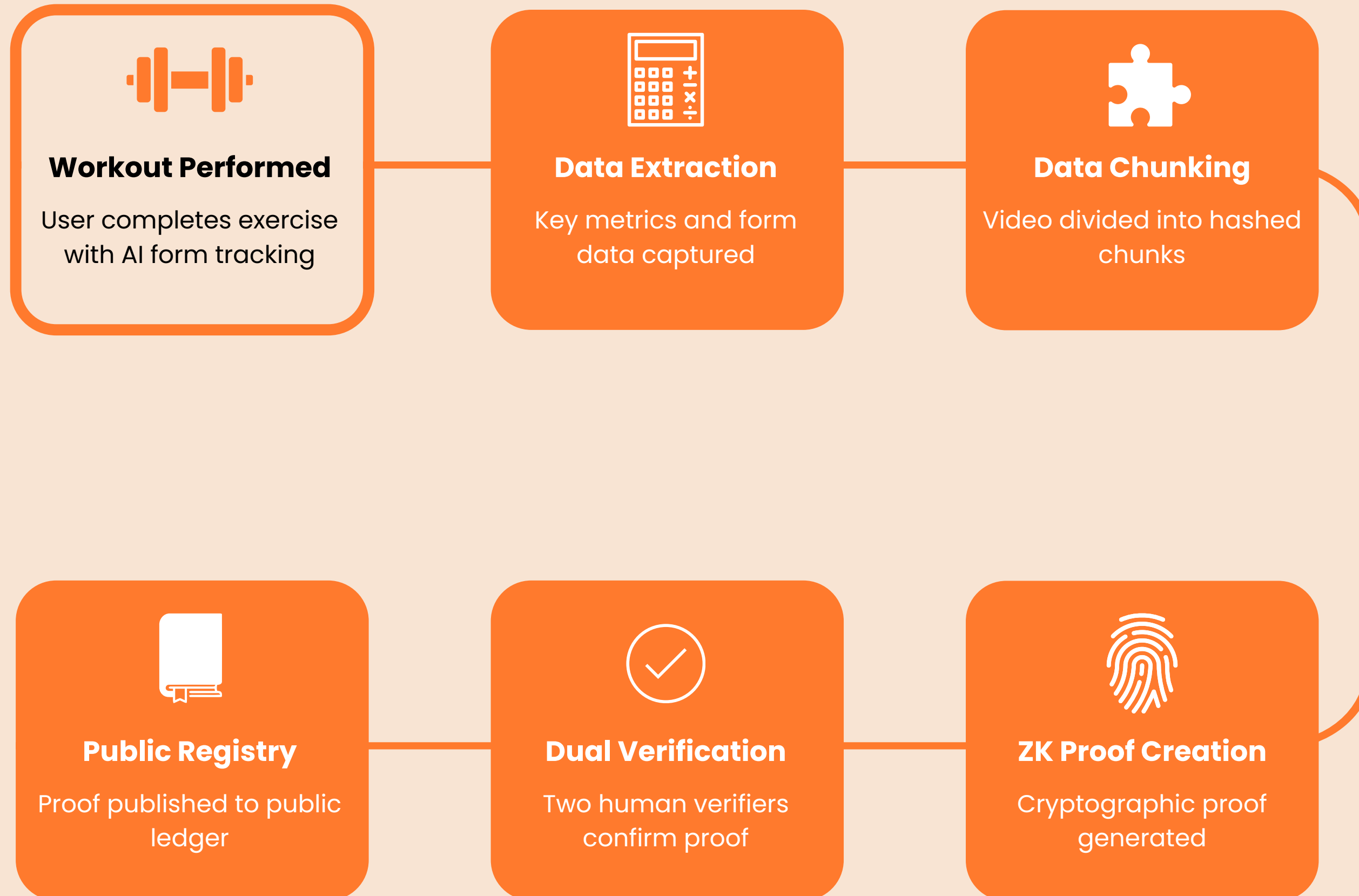


# Dual-Verifier System

Every workout is verified by both AI and two independent human verifiers, creating a triple-layer verification process that ensures maximum accuracy and fairness.



## How CashFit.ai's Workout Verification Works

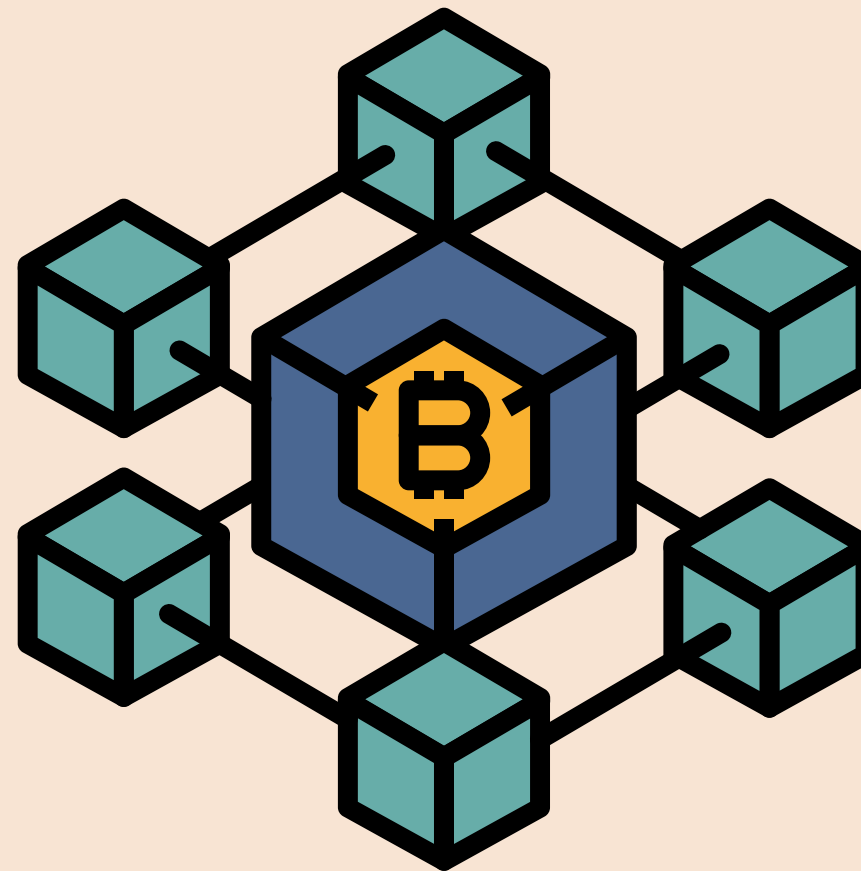


# Data Privacy in CashFit.ai

Data Type	Privacy Status	Storage Method	Public Access
Workout Videos	Private	Encrypted & Chunked	No - Only verifiers can access, with automated face blurring.
User Identity	Semi-Private	Hashed User IDs	Yes - Only pseudonymous ID visible.
Exercise Type	Public	Plain Text	Yes - Visible to all users.
Repetition Count	Public	Plain Text	Yes - Visible to all users.
AI Form Score	Public	Plain Text	Yes - Visible to all users.
Verification Hashes	Public	Blockchain-like Structure	Yes - Visible to all users.
Verification Results	Public	Plain Text	Yes - Visible to all users.
Verifier Identity	Semi-Private	Hashed Verifier IDs	Yes - Only pseudonymous ID visible.

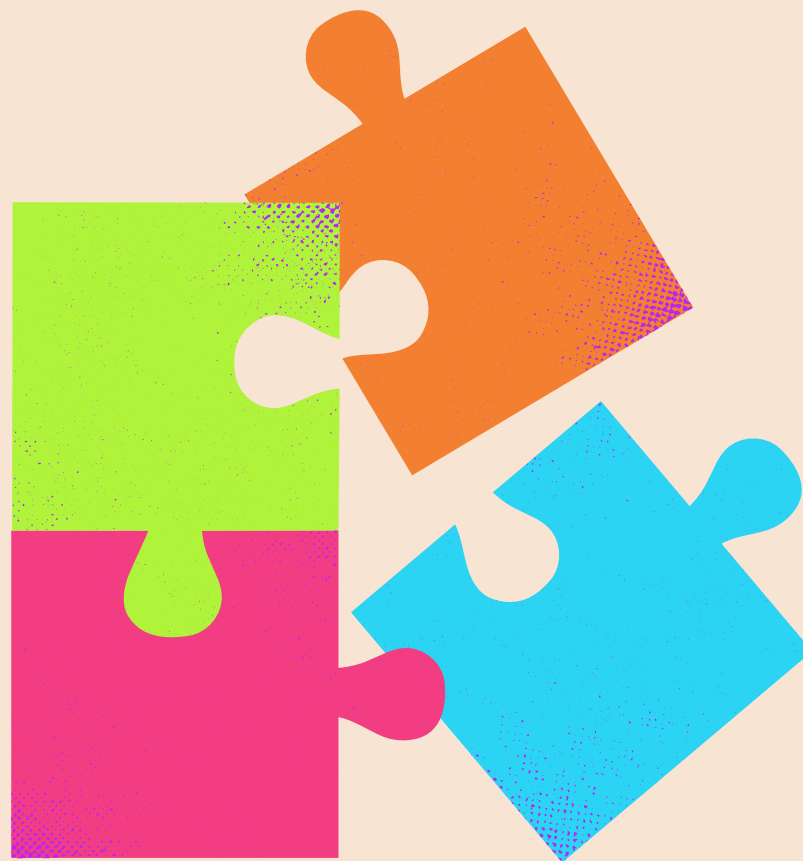
# Blockchain-Like Data Structure

CashFit.ai implements a blockchain-like data structure to ensure the integrity and immutability of workout data.



# Chunked Storage

Workout videos are divided into multiple chunks (typically 900KB each) for efficient storage and verification. Each chunk contains a portion of the video data in an encrypted format.



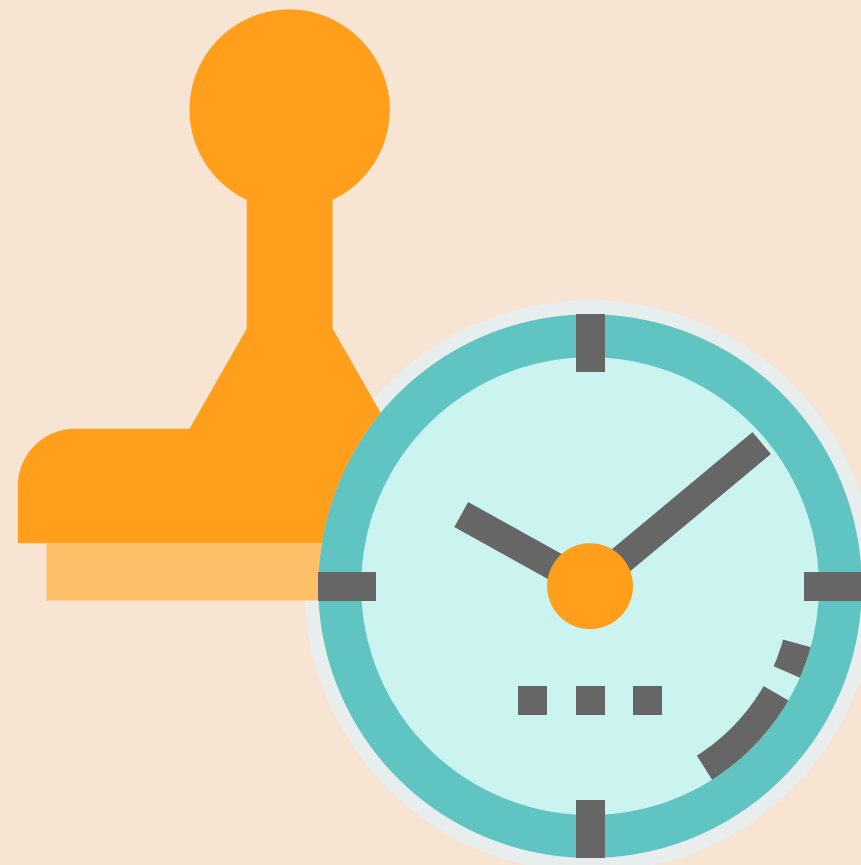
# Chained Hashing

Each chunk contains not only its own hash but also the hash of the previous chunk, creating a chain of hashes that ensures the integrity of the entire sequence. This makes it impossible to tamper with any single chunk without affecting the entire chain.



# Timestamp Verification

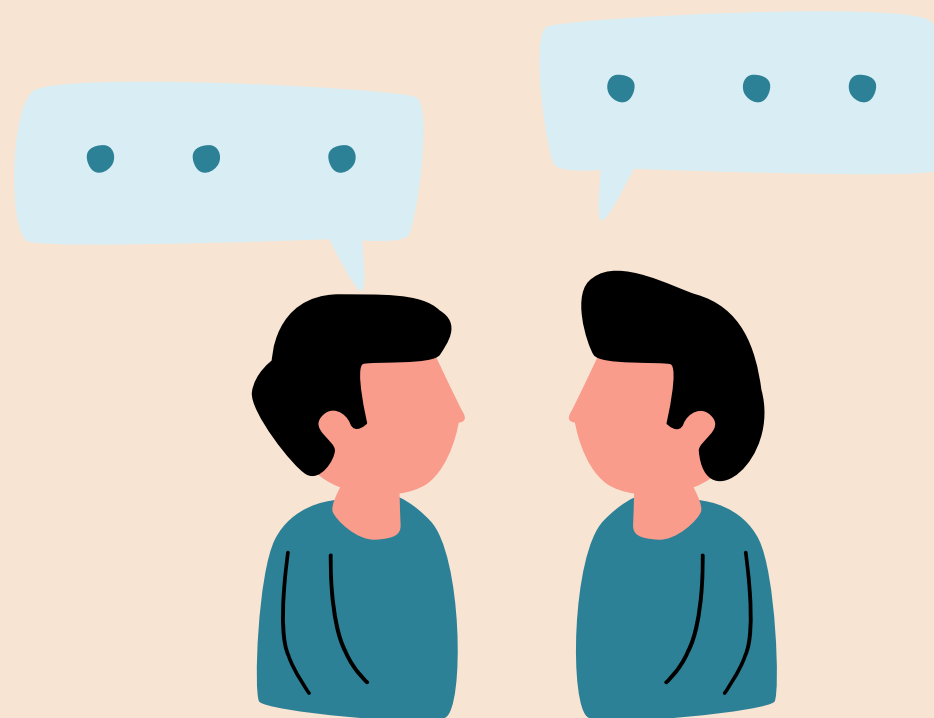
Each chunk and verification step is timestamped, creating an auditable trail of when each action occurred, ensuring transparency in the verification process.





## Dual-Verifier Consensus

Two independent human verifiers must reach consensus on the validity of a workout. This creates a system similar to blockchain validators, where multiple parties must agree on the state of the data.



# Merkle Tree Validation

Workout data is organized in a Merkle tree structure where each leaf represents a specific data point (reps, form, duration, etc.). This allows for efficient and secure verification of specific data without revealing the entire dataset.



## Tamper-Proof Storage

Once verified, workout data cannot be altered or deleted, ensuring the permanence and immutability of records. Any attempt to modify data would require changing the entire chain of hashes, which is computationally infeasible.

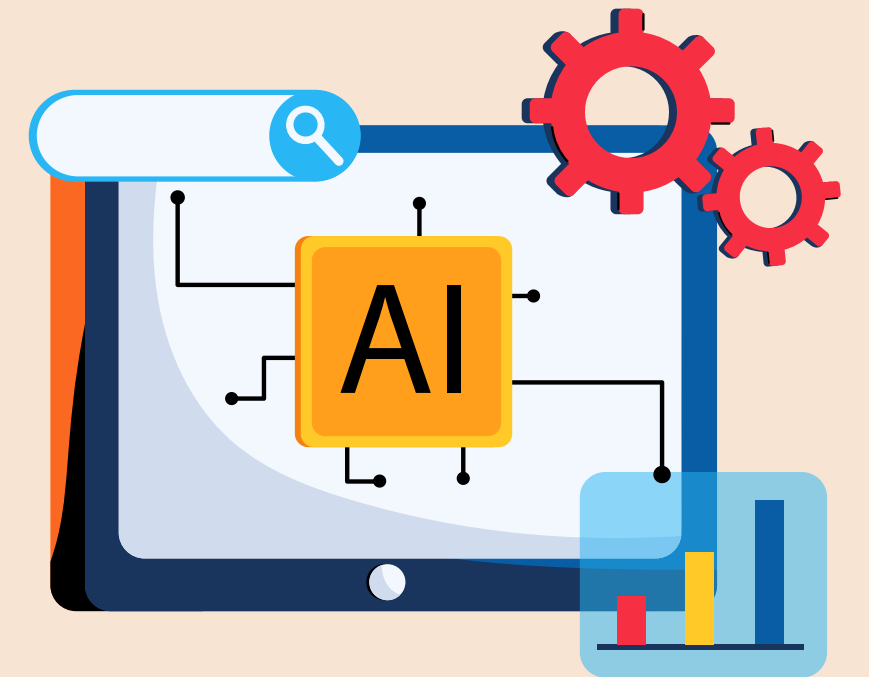


# Sample Chunk Structure

```
{  
  "data": "[encrypted video data]",  
  "previousHash": "0x7c2b3d9a1f8e4c5b6a7d8e9f0a1b2c3d",  
  "hash": "0x8fb4c3e7291b5f9d2b49e6a8dc35f107",  
  "sequence": 2,  
  "timestamp": 1697939472000  
}
```

# AI Model Information

- **Pose Detection:** TensorFlow.js MoveNet v4.0.1
- **Model Hash:** 0x7c2b3d9a1f8e4c5b6a7d8e9f0a1b2c3d
- **Accuracy Rating:** 96.8%



# Verification Example

Verified: Oct 22, 2025 • 10:45 AM

Push-Up Challenge: Day 15

## Workout Details

- User ID: user\_0x7c2b3...4dle
- Repetitions: 20/20 (100%)
- AI Form Score: 96.4%
- Duration: 02:34
- Verified: Oct 22, 2025 • 10:45 AM



## Primary Verifier

- Verifier ID: verifier\_0x3f5e8d...
- Verified at: 10:32 AM

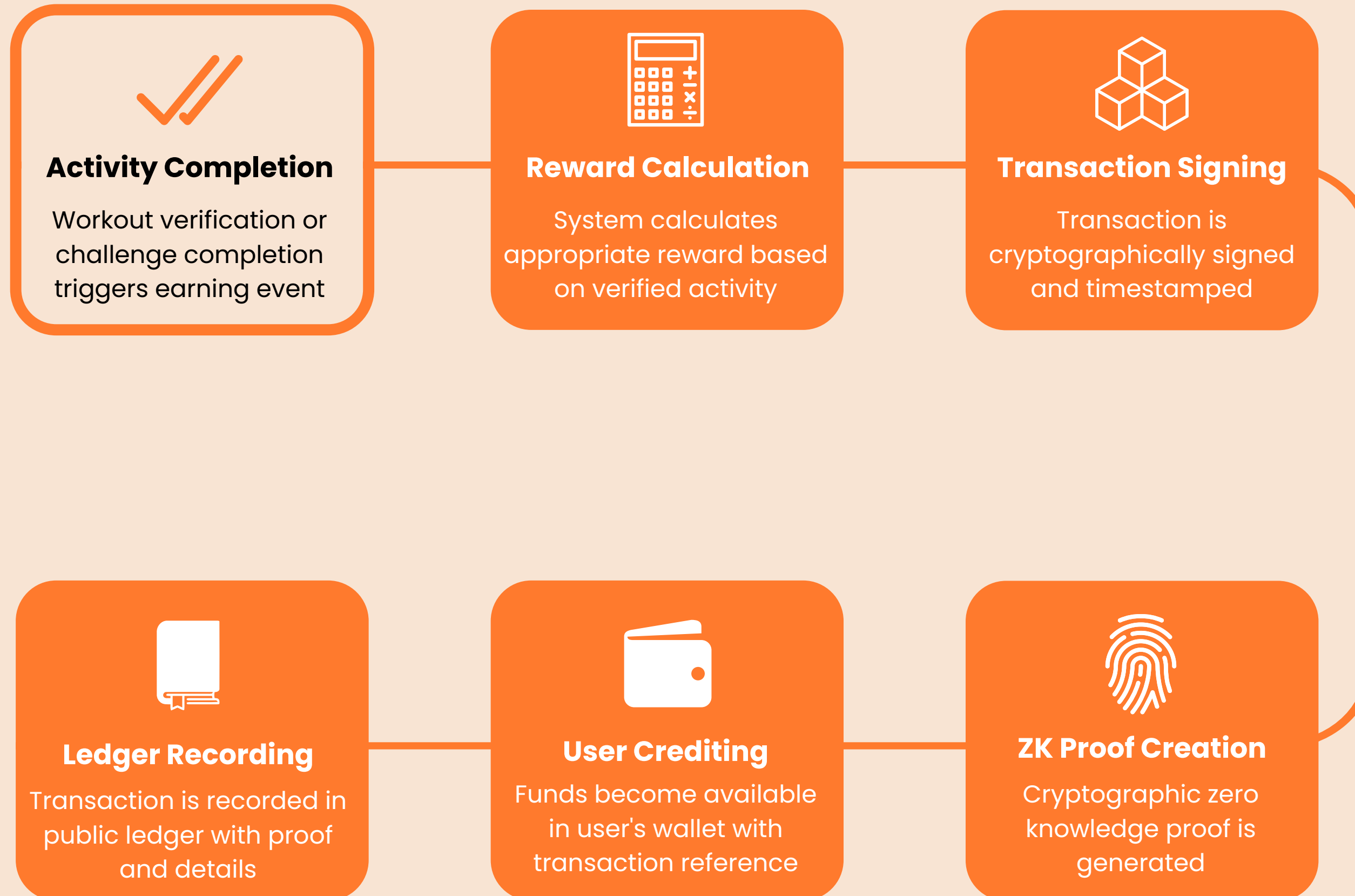
## Secondary Verifier

- Verifier ID: verifier\_0x9c4b7a...
- Verified at: 10:45 AM

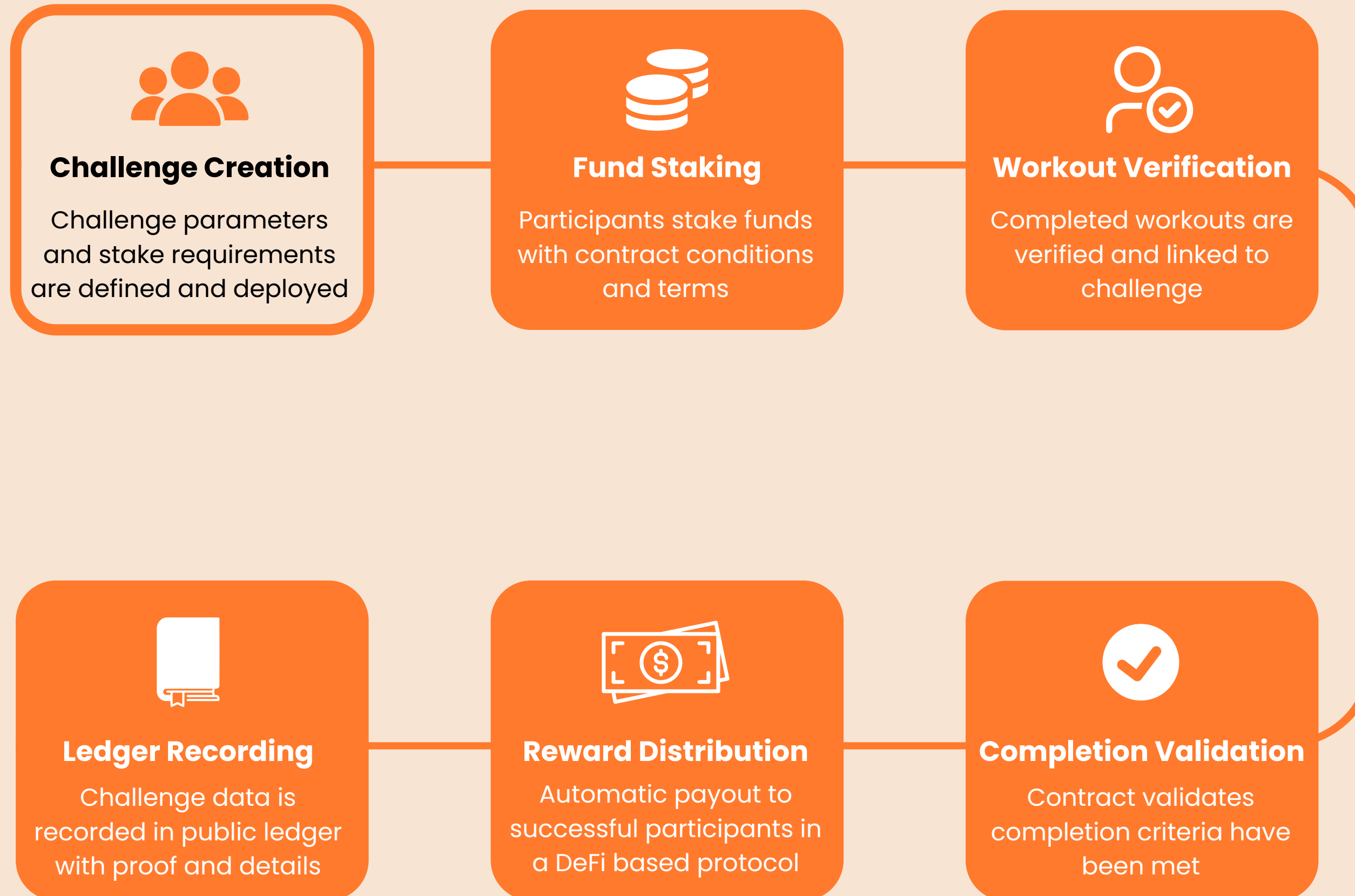
## Zero-Knowledge Proof

zk-snark:0x8fb4c3e7291b5f9d2b49e6a8dc35f107b498c3a209cb4ce918e0523895603a5fc7d9ea24b10f5e682c

## How CashFit.ai's Earnings Work

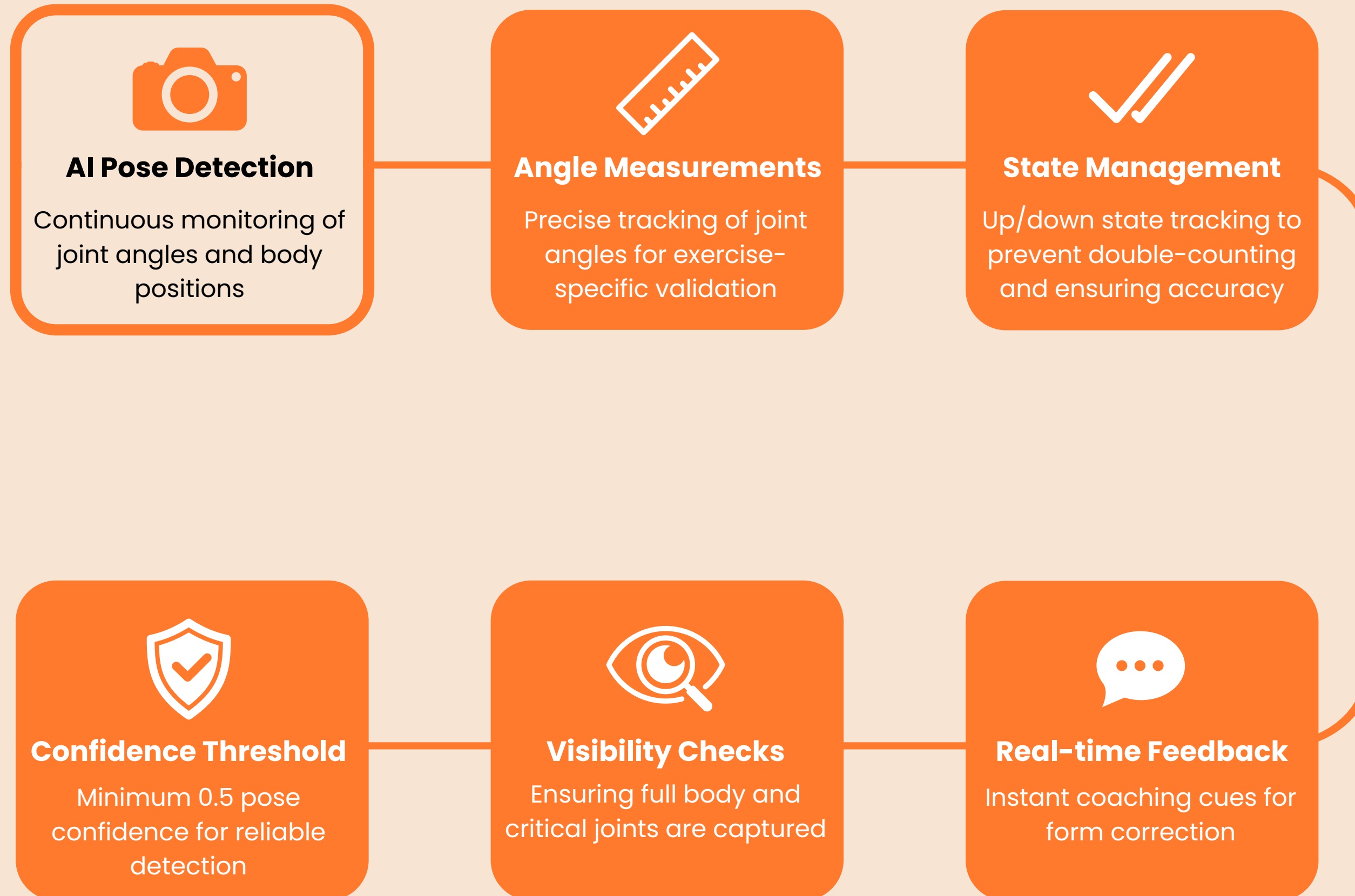


## How CashFit.ai's Challenge Smart Contracts Work





## Calculation behind AI-powered Workout Verification

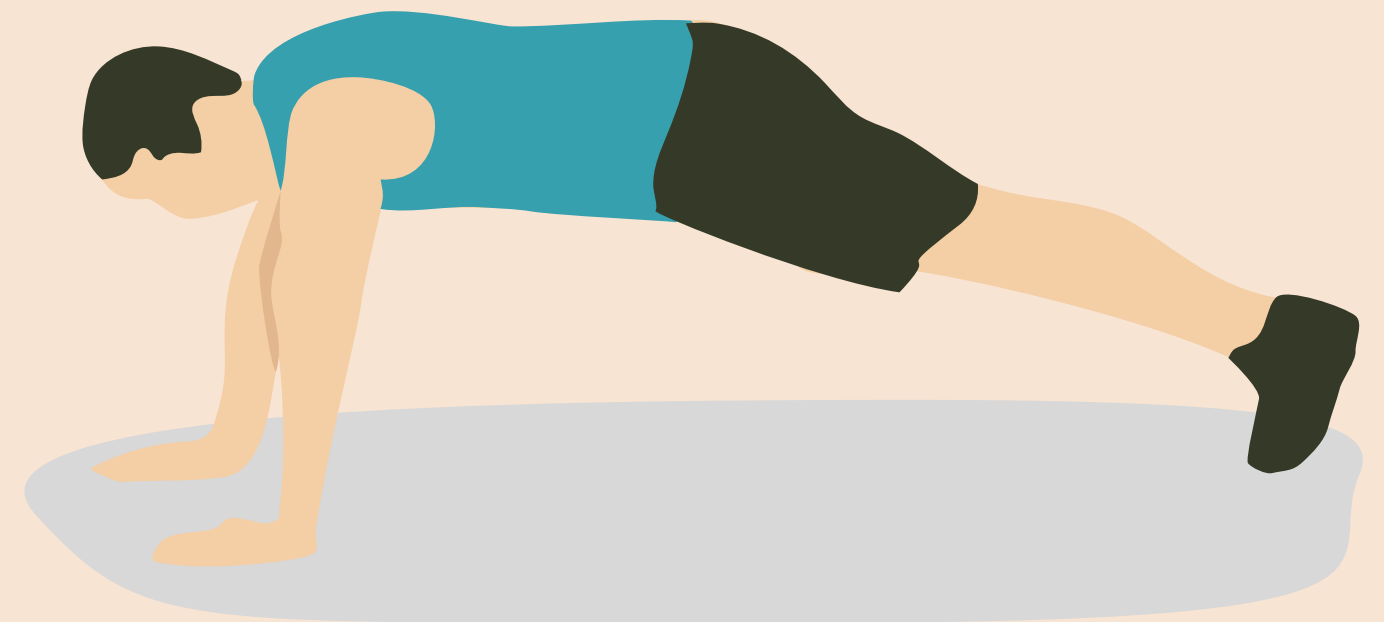


# Exercise-Specific Validation Rules -->



# Push-ups

- **Tracks:** Shoulders, elbows, wrists, hips
- **Up position:** Elbow angle  $> 160^\circ$
- **Down position:** Elbow angle  $< 90^\circ$



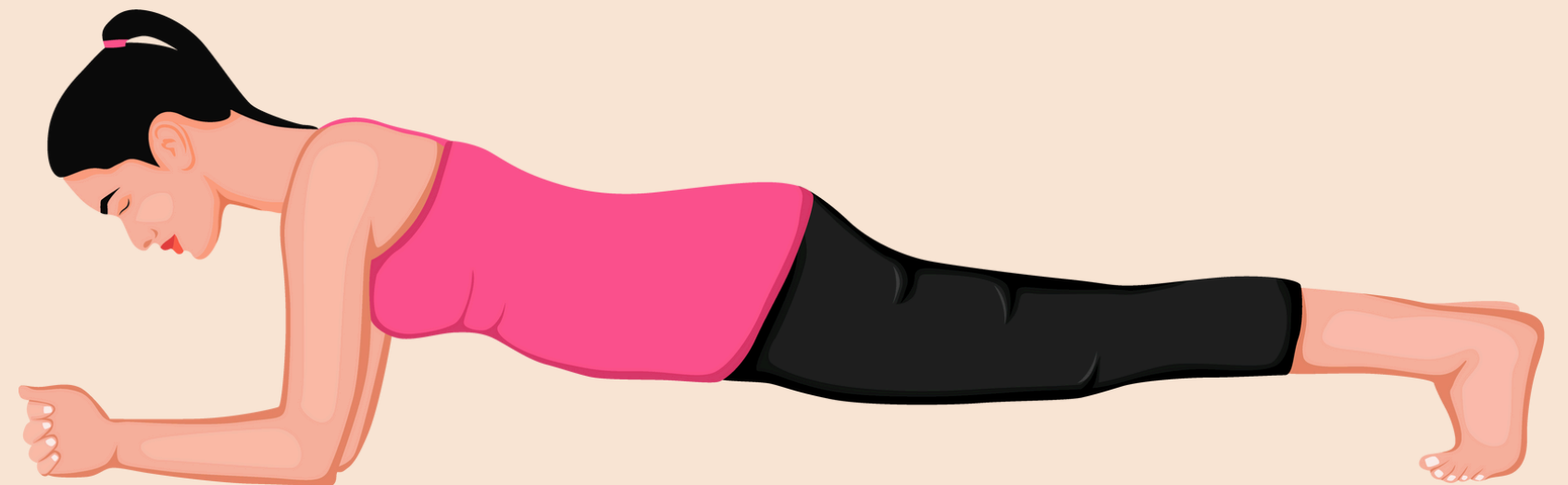
# Squats

- **Tracks:** Knee angles
- **Standing:** Knee angle  $> 160^\circ$
- **Squatting:** Knee angle  $< 90^\circ$



# Planks

- **Measures:** Back straightness
- **Valid angle:**  $> 160^\circ$
- **Time-based tracking**



# Lunges

- **Tracks:** Alternating legs
- **Bend:**  $< 100^\circ$
- **Straight:**  $> 140^\circ$



# Jumping Jacks

- **Tracks:** Wrist and ankle distances
- **Measures:** Spread positions
- **Normalized thresholds**



# Mountain Climbers

- **Tracks:** Knee lift towards chest & knee-to-torso distance
- **Measures:** Knee angle  $< 90^\circ$  & distance  $< 30\%$  of torso length
- **Reset Position:** Knee angle  $> 160^\circ$  & distance  $> 60\%$  of torso length

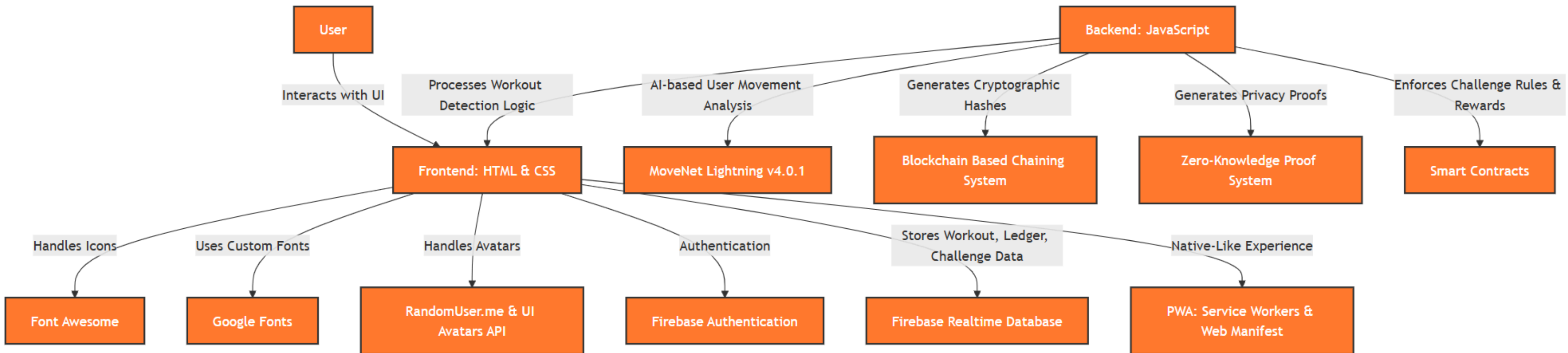




# Our Impact

- **Earn Real Rewards for Fitness:** CashFit.ai transforms workouts into tangible financial rewards, boosting motivation and consistency through real stakes.
- **Stay Accountable with Proof:** Every workout is verified through AI and human validation, ensuring fairness, transparency, and true accountability.
- **Privacy-Preserving Fitness:** Advanced encryption, face masking, and zero-knowledge proofs ensure users' workout data remains private and secure.
- **Gamified Motivation System:** By staking money on challenges, users experience a powerful mix of reward-driven dopamine boosts and penalty-driven discipline.
- **Immutable Workout History:** Blockchain-style records provide a tamper-proof, verifiable public ledger of workouts, verifications, challenges, and earnings.

# Our Technology



**Try Now:** <https://cashfit-ai.web.app/>

**Thank You**

 CashFit.ai