MetaPet Whitepaper

1. Project Overview

MetaPet is an innovative digital life project that integrates **blockchain NFT trading**, **Real World Asset (RWA) mapping**, and **AI-powered companion systems**.
Users can adopt, grow, and trade NFTs that represent real-life pets on the blockchain. Experience features like evolution, breeding, AI interaction, and asset appreciation to create your own digital pet universe.

2. Project Vision

MetaPet aims to become the world's leading platform for **"Real Asset Digitization + Virtual Life Companionship"**, bridging the physical and digital worlds.
We empower pet asset management, AI ecosystems, and the financialization of RWA through blockchain.

3. Core Features

3.1 NFT Minting & Real Asset Binding

Each NFT represents a real, living pet and is immutable on-chain (RWA mapping).

Pet metadata (birth date, gender, breed, growth level, life status, etc.) is managed on-chain.

Metadata dynamically updates and is stored on IPFS for transparency and authenticity.

3.2 NFT Trading Market

Built-in marketplace (MetaPet Market) supporting ETH and USDT payments.

List, buy, transfer, and favorite pet NFTs.

Referral rebate system encourages community growth.

3.3 Adoption & Growth

Every user can adopt one initial pet NFT for free to start their growth journey.

Pets grow through time, missions, and interactions.

Each growth stage updates the NFT's metadata and virtual appearance.

3.4 Breeding System

Pets reaching a certain level (Level 100+) can breed.

Requires pairing of opposite genders and same breed.

Offspring NFTs are generated based on heredity and randomness.

3.5 AI Companion

Each pet NFT has a dedicated AI personality for chat, Q&A, and emotional interaction.

Unlock new skills, emojis, and actions as pets grow.

Future plans include 3D avatars and AR interactions.

3.6 Growth Logs & Visualization

Users can upload images, videos, and growth logs of their pets to IPFS.

Regular updates generate new IPFS hashes linked to the NFT metadata.

3.7 RWA Mapping & Traceability

Verified custodians authenticate the real pet's identity, health, and status.

Users can trace the real-world linkage behind each NFT, ensuring trust.

4. Technical Architecture

Smart Contracts: Built with Solidity, using Ownable + IERC721 + extensible interfaces.

IPFS Storage: Pinata powers image/video log storage.

AI System: Integrated with OpenAI and proprietary models for natural language and avatar generation.

Frontend: Vue 3 + Vite with responsive design for mobile and desktop.

Backend: Spring Boot microservices for NFT event listening, transaction logging, content moderation, etc.

On-chain Auditing: All key actions are on-chain and traceable.

Asset Custody: Third-party partners provide real pet custody and verification services.

5. Economic Model

Initial NFT Distribution: Some pets can be adopted for free; premium pets available via breeding or marketplace.

Trading Fees: A small fee is charged for transactions, used for ecosystem operations and token burn.

Referral Rebates: Referrers receive a commission on referred user transactions.

Future Token Incentives (Planned): Launch of governance token `$MPET` for platform governance and staking rewards.

6. Project Highlights

Module	Innovation
Real Asset Mapping (RWA)	Each NFT corresponds to a real pet, immutable on-chain
Dynamic NFTs	Attributes and appearance evolve with growth
Integrated Marketplace	Supports ETH/USDT trades with referral commissions
AI Companionship	Each pet has its own evolving AI personality
Log Traceability	On-chain image/video/text logs record each stage of growth

7. Roadmap

Timeline	Milestone
Q2 2025	MetaPet mainnet launch; adoption & growth live
Q3 2025	NFT marketplace and breeding system go live
Q4 2025	Beta version of AI companionship system released
Q1 2026	RWA custody standard released; cross-chain expansion
Q2 2026	Metaverse ecosystem construction; AR/VR pet interaction

8. Team & Partners

Core Team:

Leo Wang – Co-Founder & CEO
Former Head of Tencent Blockchain, with 10+ years of experience in blockchain and fintech.

Emily Zhao – Co-Founder & CTO
Former Senior Smart Contract Engineer at Alibaba, expert in contract architecture and governance.

Dr. Simon Chen – Biological Asset Advisor
Renowned zoologist focused on pet species preservation and management.

Jerry Liu – AI Systems Lead
Former OpenAI collaborator, specialized in NLP and virtual avatar generation.

Sophia Yang – Product Design Lead
Experienced in Web3 social/game product design, UX/UI specialist.

Partners:

Chainlink (Oracle integration)

Pinata (IPFS content storage)

CertiK (Smart contract auditing)

Rover (Real-world pet custody and verification)

OpenAI Ecosystem Member (AI collaboration)

9. Risk Disclosure

RWA verification depends on the reliability of third-party custodians.

Digital asset prices are highly volatile. Users should assess their risk tolerance.

Legal and compliance risks may arise. The team is committed to addressing them proactively.

10. Project Disclaimer

MetaPet is currently an experimental project.
All features, data, and economic models are under active development and may be adjusted or iterated.
Users should understand and accept the risks inherent to experimental projects, including (but not limited to) system failures, asset volatility, and feature changes.
The team makes no guarantees regarding the stability, security, or completeness of experimental features.
We welcome developers, researchers, and enthusiasts to join us in pushing the boundaries of digital life and blockchain innovation.

11. Conclusion

MetaPet is not just a revolution in digital pets—
It’s a new chapter combining real-world assets, blockchain, and AI technology.
Every growth milestone and interaction is a miracle at the intersection of life and the digital world.
Join MetaPet and explore the infinite possibilities of digital life!