

AI Authenticity & Proof of Personhood

Ensuring Identity in a Synthetic Future

TEAM NAME -- RACER

The Authenticity Crisis



Rising Exploitation

Deepfake audio and video scams are proliferating, leveraging neural networks to bypass traditional security layers and deceive human targets.



Grandparent Scams

AI mimics the voices of loved ones to create high-stress, emotional fraudulent scenarios that result in immediate financial loss.



Real-time Failure

Victims currently lack tools to verify authenticity in live calls, where emotional manipulation prevents critical thinking.

The Deepfake Threat

- ✓ **AI Voice Cloning:** Synthesizing unique vocal signatures during active phone calls.
- ✓ **Emotional Leverage:** Using fear and urgency to bypass logical verification processes.
- ✓ **Live Interaction:** Current verification protocols are static and fail in dynamic, live conversations.



Digital Safeword Ecosystem



Voice Analyzer

App-based background monitoring that identifies synthetic speech signatures in real-time.



Live Alerts

Instant notification to the user when AI-generated vocal patterns are detected during a session.



Blockchain Proof

Safeword + blockchain handshake to establish an immutable proof of human personhood.

Core Technology Stack

LAYER	TECHNOLOGIES USED
Audio Intelligence	ML Voice Frequency & Spectral Analysis
Verification	Blockchain Distributed Identity Ledger
Detection	Synthetic Speech Detection APIs
Integration	Mobile SDKs for System Call Monitoring

Neural Detection

Deepfake Identification

Training advanced ML models on real vs. synthetic vocal datasets to recognize prosody feature anomalies.

Utilizing spectral analysis and continuous learning from flagged calls to stay ahead of generative AI evolution.

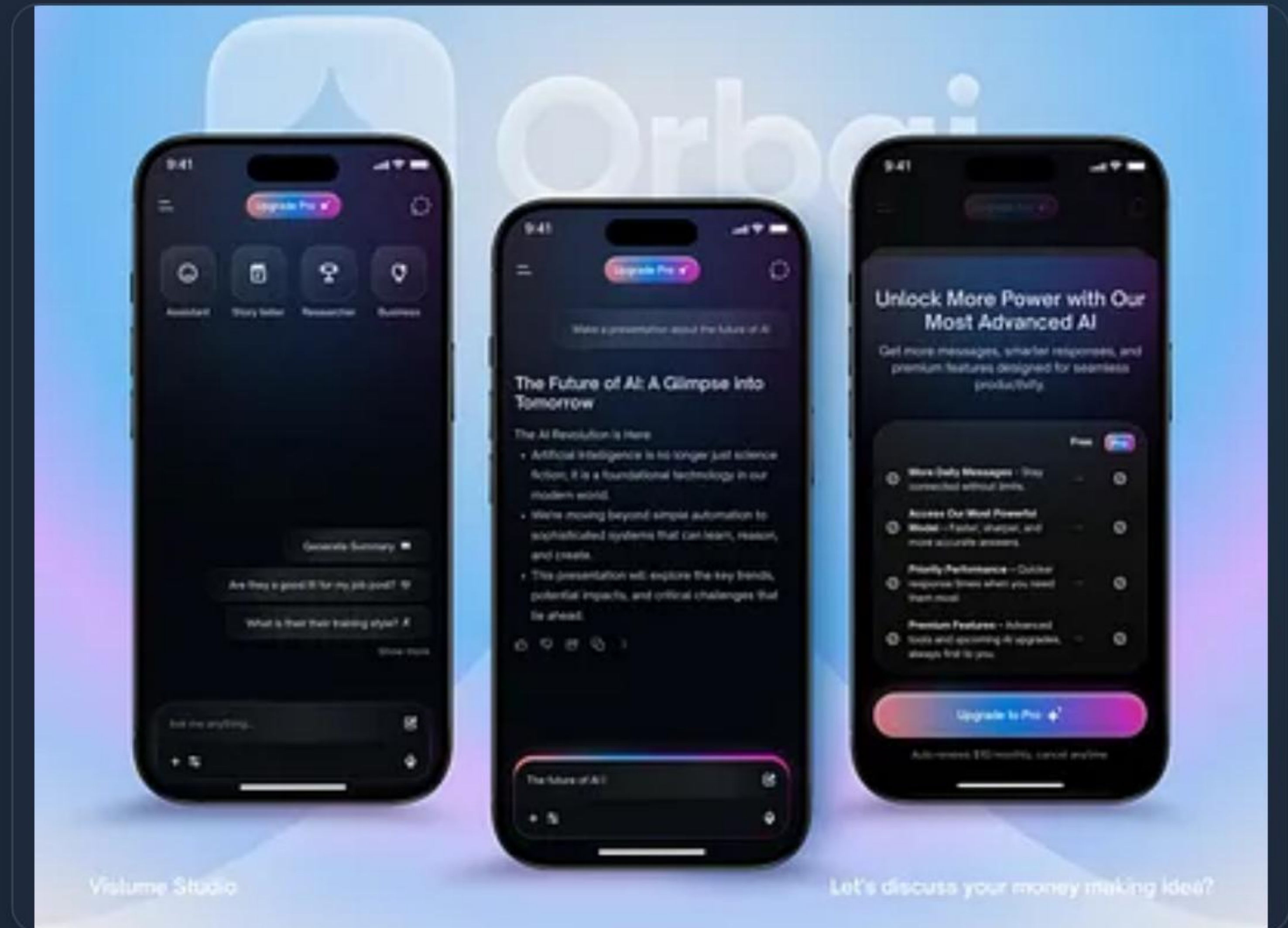
Blockchain Identity

- ✓ **Immutable Identity:** Digital Signatures: Unique cryptographic ID for every verified user.
- ✓ **Handshake Protocol:** Silent identity exchange during active call initiation.
- ✓ **Privacy-Preserving:** Secure design ensuring zero-knowledge verification.



User Experience & Impact

- ✓ **Background Monitoring:** Continuous analysis of call audio for synthetic artifacts.
- ✓ **Real-time Alerts:** Immediate visual warnings when high probabilities of AI are detected.
- ✓ **Safeword Prompt:** Verification mechanism to confirm identity during suspicious activity.
- ✓ **Secure Onboarding:** Seamless enrollment to establish a trusted voice profile.



Team Racer



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Image Sources



<https://www.veritonevoice.com/wp-content/themes/veritone-voice/dist/images/voice-clone-blog.jpg>

Source: www.veritonevoice.com



https://images.stockcake.com/public/0/a/e/0aelfe66-15a3-48bb-b0dd-87lc8c03a67f_large/digital-sound-waves-stockcake.jpg

Source: stockcake.com



<https://easy-peasy.ai/cdn-cgi/image/quality=95,format=auto,width=800/https://media.easy-peasy.ai/27feb2bb-aeb4-4a83-9fb6-8f3f2a15885e/72lc7ea1-5b88-4d13-97ce-b825lee2b769.png>

Source: easy-peasy.ai



<https://cdn.dribbble.com/userupload/44925442/file/still-56638036f565c533630ea27322aeb232.png?format=webp&resize=400x300&vertical=center>

Source: dribbble.com