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CUSTOMER# APPLICANT NAME **NEVERMISSED LICENSED TRUST**

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Title

SmartLicense-X: AI Powered Licensing Enforcement and Compliance System

Applicant Information:

Full Name: NEVERMISSED LICENSED TRUST

Address: 2 Princes Street, Port Adelaide SA 5015, Australia

Country of Nationality and Residence: Australia

Inventor Information:

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Address: 2 Princes Street, Port Adelaide SA 5015, Australia

Country of Nationality and Residence: Australia

Title of Invention:

SmartLicense-X: AI Powered Licensing Enforcement and Compliance

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Abstract

SmartLicense-X is an AI powered licensing and compliance enforcement system designed to detect, monitor, and regulate unauthorized AI model usage. The system integrates behavioral fraud detection, deception based licensing traps, blockchain smart contract enforcement, and automated regulatory reporting. It prevents AI misuse, detects licensing violations in real time, and applies financial and access penalties using decentralized infrastructure. SmartLicense-X supports compliance enforcement across government agencies, financial institutions, cloud service providers, and regulated AI deployments.

Technical Field

The invention relates to artificial intelligence governance, licensing compliance, fraud detection, and smart contract based enforcement. It applies behavioral AI analytics, federated fraud intelligence, deception driven traps, and blockchain validation to automate licensing control and regulatory enforcement across AI powered systems.

Background of the Invention

As artificial intelligence becomes foundational to financial systems, cybersecurity, carbon markets, and enterprise infrastructure, licensing misuse and AI fraud have increased dramatically. Existing licensing systems are reactive, static, and unable to detect unauthorized model reuse or cloning in real time. This creates regulatory, financial, and operational risk.

Many current tools lack deception based detection techniques, smart contract enforcement, or federated learning based anomaly tracking. Regulators including the Securities and Exchange Commission and oversight authorities under the European Union AI Act now require provable licensing and compliance automation. However, existing solutions fail to deliver such enforceable frameworks.

Summary of the Invention

SmartLicense-X introduces a layered AI enforcement system comprising:

- A real time AI fraud detection engine that applies behavioral anomaly analysis to detect misuse
- Deception based honeypot traps that simulate AI APIs and licensing endpoints to detect unauthorized model access
- A blockchain smart contract licensing enforcement engine that controls access, fee payments, and license status
- A regulatory reporting interface for real time compliance submission to oversight bodies
- A federated AI monitoring network that shares anonymized fraud patterns across enterprise and public infrastructures

The system dynamically enforces AI model licensing across private, public, and hybrid environments. It detects violations, penalizes misuse, and ensures compliance via blockchain enforced contracts and autonomous fraud response.

Detailed Description of the Invention

1. AI Fraud Detection Engine

The AI fraud detection engine continuously monitors model execution behavior, access logs, usage patterns, and API activity to identify unauthorized or cloned deployments.

- Behavioral scoring models compare runtime data against baseline behavior of licensed models
- Federated anomaly detection shares indicators across monitoring nodes
- Violations are detected based on deviations in execution flow, access frequency, or model input response signatures

2. Deception Driven Compliance Traps

SmartLicense-X deploys honeypot models and fake license validation endpoints to lure potential unauthorized users or AI cloners.

- Simulated API endpoints and licensing servers detect suspicious traffic
- When triggered, the deception engine logs behavior, injects misleading outputs, and flags sources for further enforcement
- Reverse manipulation corrupts adversarial AI models by feeding false learning data, preventing effective model reuse

3. Smart Contract Licensing and Penalty Enforcement

Each AI model instance must validate its license via a blockchain smart contract ledger prior to activation.

- Smart contracts verify signature tokens, model IDs, and usage limits
- If violations are detected, contracts apply penalties such as throttling, key revocation, or financial deductions
- A tamper proof usage log ensures traceable enforcement records

4. Federated Monitoring and Regulatory Compliance

SmartLicense-X enables privacy preserving sharing of fraud signals across AI license networks using federated learning protocols.

- Oversight regulators such as the Securities and Exchange Commission and European AI authorities receive automated compliance reports
- These include model IDs, timestamps, behavioral logs, and licensing history
- Carbon credit registries and fintech fraud monitoring agencies also receive tailored fraud notifications

Independent Claims

Claim 1

An artificial intelligence licensing enforcement system comprising:

- An AI fraud detection engine configured to analyze model behavior, access frequency, and anomaly signatures to detect unauthorized model usage
- A deception driven compliance module comprising simulated license endpoints and honeypot APIs to detect AI misuse
- A blockchain based smart contract engine configured to verify licensing credentials, enforce access controls, and log transactions immutably
- An automated penalty system configured to apply financial deductions, model throttling, or access revocation based on policy violations

Claim 2

The system of claim 1, wherein the fraud detection engine applies federated behavioral analysis to monitor AI activity across distributed cloud environments.

Claim 3

The system of claim 1, wherein the deception compliance module simulates license responses to identify unauthorized attempts and activate reverse manipulation countermeasures.

Claim 4

The system of claim 1, wherein the blockchain engine performs real time enforcement of licensing fees, access validation, and penalty execution without manual intervention.

Claim 5

The system of claim 1, wherein the penalty system is integrated with a regulatory notification protocol that sends structured reports to compliance authorities in response

to AI violations.			

Flowcharts and Diagrams (Placeholder Descriptions)

Figure 1 illustrates the core enforcement workflow of SmartLicense-X,

showing how AI models are deployed, license keys are validated, fraud signals are monitored, and smart contracts are triggered to enforce penalties or access restrictions.

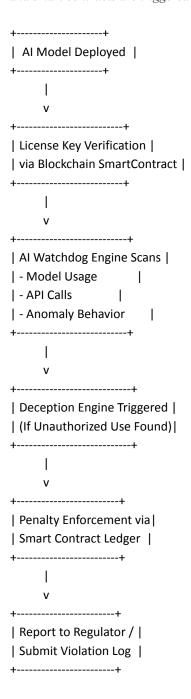


Figure 2 shows the internal structure of the deception-driven fraud detection engine, including honeypot APIs, simulated model endpoints, behavior logging modules, and adversarial data corruption layers.

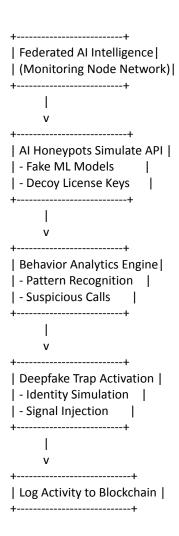
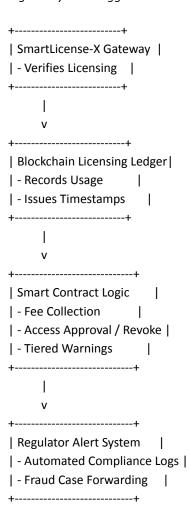


Figure 3 - Blockchain Enforcement Flow

Depicts smart contract logic for license validation, access revocation, tiered penalties, and regulatory alert triggers.



Conclusion

SmartLicense-X provides a foundational platform for AI governance, capable of autonomous licensing enforcement, fraud detection, and regulatory reporting. By combining federated AI monitoring, deception traps, blockchain verification, and smart contract logic, the system delivers enforceable, scalable, and tamper proof AI compliance infrastructure.

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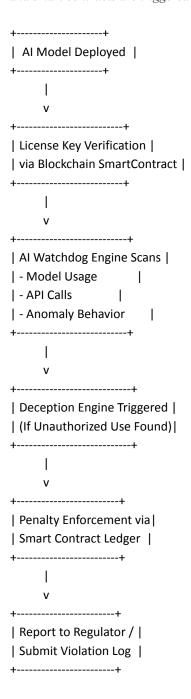


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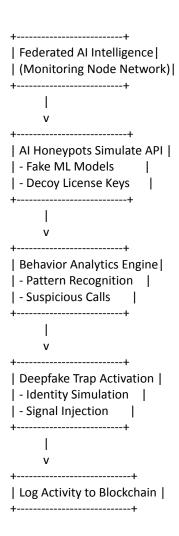
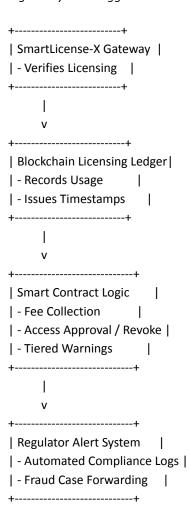


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