# Riqz’s true random AI engine promises a new era of unbiased decision-making



RIQZ, a London-based artificial intelligence innovator, has announced a pioneering breakthrough with the launch of its True Random AI Engine, aiming to fundamentally transform automated decision-making by eliminating algorithmic bias and increasing transparency and fairness. According to the company, traditional AI systems rely on pseudo-random algorithms—sequences that only simulate randomness but remain ultimately predictable. This predictability, RIQZ contends, introduces bias, repetition, and vulnerability into AI decision frameworks. The new system replaces these mechanisms with genuine, entropy-based randomness derived from naturally unpredictable sources, marking a significant departure from conventional deterministic AI models.

The core of RIQZ’s True Random AI Engine lies in its integration of quantum-inspired entropy sources combined with continuous verification algorithms to ensure each decision or data output is truly random, tamper-proof, and independently generated. This approach—described by RIQZ as "entropy intelligence"—embraces randomness not as noise but as a structural feature of intelligent behaviour, allowing AI systems to adapt, evolve, and make autonomous choices free from hidden manipulation or reverse engineering. The modular design of the engine also allows seamless integration into existing infrastructures via secure APIs, enabling organisations to upgrade without full system replacements.

RIQZ states the technology’s benefits span multiple sectors. In cybersecurity, the introduction of authentic random behaviour patterns disrupts adversaries attempting to predict system responses. Autonomous systems gain resilience and flexibility through non-repetitive, adaptive decision-making. In data science and simulations, unbiased random variables enhance the reliability of predictive models and datasets, while in scientific research, verifiable entropy ensures reproducibility and experimental integrity.

Complementing this product announcement, independent research provides insight into the underlying technologies enabling true randomness in AI. A recent scientific paper described the Quasi-Superposition Quantum-inspired System (QSQS), which generates true randomness by measuring unpredictable sorting times and deterministic permutation counts in computational processes, with the output entropy approaching theoretical maxima. This physics-based method exemplifies how real-time system nuances such as CPU jitter and cache latency can be leveraged to produce secure, unpredictable random bits crucial for post-quantum cryptographic security.

Beyond technical innovation, the launch of RIQZ’s True Random AI Engine connects with growing ethical and regulatory demands for AI fairness, accountability, and transparency. Studies in AI fairness underscore how biases in data, models, and procedures can entrench social inequalities, undermining public trust and further marginalising disadvantaged groups. By embedding scientifically validated randomness at a structural level, RIQZ proposes a new ethical foundation for automated decision-making—where unpredictability supports fairness by preventing systematic bias and manipulation, serving as a mechanism of trust in AI systems increasingly integrated into society.

Nonetheless, the broader AI governance landscape highlights ongoing challenges. Experts stress the need for multifaceted frameworks that combine robustness, privacy protection, and fairness to navigate vulnerabilities created by rapid technological advances. Ensuring secure, privacy-preserving, and fair AI requires comprehensive policy measures, such as access control policies and domain-specific fairness assessments, that can coexist with innovations like RIQZ’s entropy-based randomness engine. In this regard, RIQZ’s technology could represent an important piece of a wider strategy to improve AI integrity and societal trust.

In sum, RIQZ’s True Random AI Engine may signify a paradigm shift in how intelligence is defined and operationalised—transforming uncertainty from a problem into a foundational feature that enhances autonomy, transparency, and fairness. As automated systems become more pervasive, innovations that ensure unbiased and verifiable randomness could be essential for building the trustworthy AI ecosystems demanded by both industry and society.

### 📌 Reference Map:

* Paragraph 1 – [[1]](https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/), [[2]](https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking)
* Paragraph 2 – [[1]](https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/), [[2]](https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking)
* Paragraph 3 – [[1]](https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/), [[2]](https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking)
* Paragraph 4 – [[3]](https://arxiv.org/abs/2508.01051)
* Paragraph 5 – [[1]](https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/), [[6]](https://dl.acm.org/doi/full/10.1145/3555803)
* Paragraph 6 – [[7]](https://dl.acm.org/doi/full/10.1145/3645102)
* Paragraph 7 – [[1]](https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/), [[2]](https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking)

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## Bibliography

1. <https://www.theglobeandmail.com/investing/markets/markets-news/Newsfile/35391981/riqz-introduces-true-random-ai-to-unbiased-decision-making/> - Please view link - unable to able to access data
2. <https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking> - RIQZ has unveiled its True Random AI Engine, aiming to eliminate algorithmic bias and set new standards for transparency and fairness in automated systems. Traditional AI relies on pseudo-random algorithms, which can be predictable and biased. RIQZ's engine introduces genuine, entropy-based randomness from naturally unpredictable sources, ensuring unique, unbiased, and independent decisions. This innovation enhances decision-making in areas like cybersecurity, autonomous systems, data science, and scientific research. The system integrates quantum-inspired entropy sources with continuous verification algorithms, making randomness a structural feature of intelligent behaviour. Its modular architecture allows seamless integration into existing infrastructures through secure APIs, enabling organisations to upgrade their deterministic systems efficiently. By embracing uncertainty as a foundation for genuine autonomy and fairness, RIQZ is reshaping the definition of intelligence. ([newsfilecorp.com](https://www.newsfilecorp.com/release/270115/RIQZ-Introduces-True-Random-AI-to-Unbiased-DecisionMaking?utm_source=openai))
3. <https://arxiv.org/abs/2508.01051> - The paper introduces the Quasi-Superposition Quantum-inspired System (QSQS), a conceptual quantum system for generating true randomness. QSQS measures two conjugate observables of a permutation sorting process: the deterministic permutation count and the non-deterministic sorting time. This framework, realised as QPP-RNG, dynamically reseeds the Pseudo-Random Number Generator (PRNG) using real-time measurements of sorting time, influenced by CPU pipeline jitter, cache latency, and OS scheduling. Empirical results demonstrate that as the repetition factor increases, output entropy approaches theoretical maxima, indicating the system's effectiveness in generating secure random bits. The study offers a physics-based perspective for engineering true randomness in post-quantum cryptographic systems. ([arxiv.org](https://arxiv.org/abs/2508.01051?utm_source=openai))
4. <https://quantumgears.com/ai-ethics/> - Quantum Gears' AI-enabled platform is guided by ethical principles to protect human values, rights, and safety. Their HITRUST r2 Certification demonstrates a commitment to strong cybersecurity and protecting sensitive data, meeting a rigorous set of 276 control requirements, including 51 AI-specific risk management factors. The platform focuses on transparency, ensuring AI models are explainable, trustworthy, and accountable. It also emphasises privacy, ensuring AI does not expose private information, especially when integrating with public Large Language Models (LLMs). The company engages multiple stakeholders, including employees, customers, regulators, and the community, to gather broad ethical perspectives. To mitigate data and algorithmic bias, Quantum Gears builds AI models on diverse and representative data, ensuring end-users understand the data sources and include data from underrepresented groups. The platform incorporates guardrails to keep LLMs on-topic and factual, with built-in quality checks and stakeholder oversight. ([quantumgears.com](https://quantumgears.com/ai-ethics/?utm_source=openai))
5. <https://arxiv.org/abs/2311.11734> - The paper presents a secure and private blockchain-based Verifiable Random Function (VRF) scheme addressing limitations of classical VRF constructions. Considering the imminent quantum computing adversarial scenario, conventional cryptographic methods face vulnerabilities. To enhance the VRF's secure randomness, the authors adopt post-quantum Ring-LWE encryption for synthesising pseudo-random sequences. The approach employs a secure ring signature supported by Non-Interactive Zero-Knowledge (NIZK) proof and a delegated key generation method, inspired by the Chaum-Pedersen equality proof and the Fiat-Shamir Heuristic. The VRF scheme integrates multi-party computation with blockchain-based decentralised identifiers, ensuring both security and randomness. Security and privacy aspects are analysed, and the entropy of the VRF scheme is approximated. Implementation details in a Solidity contract are provided, along with a method for validating the VRF's proof, suitable for contexts requiring both randomness and verification. Statistical randomness tests exhibit a 98.86% pass rate over 11 test cases, with an average p-value of 0.5459 from 176 total tests. ([arxiv.org](https://arxiv.org/abs/2311.11734?utm_source=openai))
6. <https://dl.acm.org/doi/full/10.1145/3555803> - The article discusses the importance of fairness in AI systems, particularly in areas like hiring, financial risk assessment, and face identification. Systematic unfairness in AI decisions can have negative social ramifications, such as underprivileged groups experiencing systematic disadvantage. This damages trust in AI and hampers its development for the greater good. The article emphasises the need for practitioners to consider fairness to avoid instilling or exacerbating social bias. It highlights that biases can take various forms, including data bias, model bias, and procedural bias, and can manifest as unfair treatment based on protected information like gender, race, and ethnicity. The article categorises metrics of fairness according to the properties of models and tasks, providing a reference for practitioners. ([dl.acm.org](https://dl.acm.org/doi/full/10.1145/3555803?utm_source=openai))
7. <https://dl.acm.org/doi/full/10.1145/3645102> - The paper discusses the challenges of AI governance, particularly in distributed AI systems, and the need for robustness, privacy, and fairness. It highlights that rapid technological advancements have created new vulnerabilities, including social and technical challenges to existing data and user privacy protection frameworks. The article argues that trustworthy distributed AI can only be achieved by integrating robustness-enhancing techniques with AI privacy and fairness protection methods. It calls for the development of privacy-preserving access control policies and software mandates to safeguard who may have what types of operational access to which data under what temporal and spatial constraints. The paper also emphasises the need for AI researchers, engineers, and users to have a policy framework with quantitative and qualitative measures on domain-specific and application-dependent requirements on fairness, privacy, and robustness guarantee. ([dl.acm.org](https://dl.acm.org/doi/full/10.1145/3645102?utm_source=openai))