

Executive Summary and FAQ

MLiglon's Integer Gate Logic (IGL) — The Post-Backpropagation Era Begins Here US Patent 12,242,946-B1

The Crisis in AI: A \$2 Trillion Industry Held Hostage by 1970's Math!

Artificial intelligence is hitting a wall. Despite breakthroughs like generative AI and large language models (LLMs), the industry remains shackled to **backpropagation**, a 50-year-old algorithm that devours **\$100B+ annually in compute costs**, guzzles energy (surpassing entire countries), and collapses under the weight of noisy data and unsustainable model sizes. Even NVIDIA's GPUs—workhorses of modern AI—struggle to keep pace with demand. The result? **AI's growth is unsustainable** without a radical reinvention of its core engine.

MLiglon's Revolution: Integer Gate Logic (IGL) — The First True Alternative to Backpropagation.

MLiglon has cracked the code with **patented Integer Gate Logic (IGL)**, a fundamentally new approach to machine learning that outperforms backpropagation on every axis that matters:

- **Accuracy:** Achieves **higher precision** on benchmark datasets, even with sparse or corrupted inputs (e.g., medical imaging, autonomous vehicles).
- **Efficiency:** Reduces memory usage **by using integers instead of floating point values**, slashes energy consumption, and accelerates training with smaller models—critical for enterprises battling escalating cloud bills.
- **Scalability:** Possibility to train models **larger** than current hardware limits using existing GPUs, unlocking AI capabilities previously deemed impossible.
- **Explainability:** Eliminates “black box” opacity with **Boolean logic-driven transparency**, meeting urgent regulatory demands in healthcare, finance, and defense.
- **Ideal for TinyML, EdgeAI, and IoT devices:** Smaller and more accurate models will fit into and run more efficiently on memory and computationally limited devices.

Why is IGL Uniquely Investable?

- **First-Mover Defensibility:** The **only viable replacement for backpropagation** known and proven at present, protected by a patent and several patents pending, with 20+ targeted in 5 years.
- **Noisy Data Dominance:** Outperforms competitors **in accuracy** on real-world datasets, solving a \$50B/year pain point in industries from logistics to biotech, specifically in EdgeAI.
- **Hardware Synergy:** Natively optimized in CUDA for GPUs (NVIDIA, AMD), achieving **parallelization gains** to maximize ROI on existing infrastructure.
- **Rapid Commercialization:** A working prototype runs on NVIDIA GPUs; enterprise software libraries and SaaS APIs are a target goal with funding.

Market Opportunity: A \$500B Infrastructure Play with Unlimited Upside.

MLiglon targets the **AI infrastructure layer**, partnering with cloud providers (AWS, Azure), chipmakers (NVIDIA, Intel), and Fortune 500 enterprises desperate to slash costs. Early adopters in **healthcare diagnostics, autonomous systems, and generative AI** will pay premiums for IGL's efficiency and transparency. With AI model training costs projected to grow **15x by 2030**, IGL is positioned to capture a dominant share of this explosive market.

The Ask: \$10M Series A to Cement Global Dominance.

We seek \$10M to:

1. **Fortify IP:** Secure 20+ patents to lock down the post-backpropagation era.
2. **Accelerate Productization:** Launch GPU-optimized libraries, SaaS APIs, and enterprise partnerships by 2028.
3. **Scale R&D:** Unlock **further efficiency gains** via IGL 2.0 (our founders keep working).

Why Invest Now?

IGL isn't an incremental upgrade—it's the **new foundation for AI**. With global demand for efficient, ethical AI exploding, MLiglon is poised to become the **ARM Holdings of machine learning**, licensing its tech across industries. Backpropagation's era ends here. The first investors to recognize MLiglon's potential will catalyze—and capture—a **trillion-dollar paradigm shift**.

Join Us: Be the VC firm that bets on the **evolution over backpropagation** in many areas and the birth of a new AI dynasty.

This Isn't a Bet on a Startup—It's a Plausible Bet on the Future of AI Itself.

MLiglon Investor FAQ

1. How do you validate that IGL outperforms backpropagation?

- We've extensively benchmarked IGL against PyTorch, MNIST, and EMNIST, as well synthetic noisy datasets over the last year. These are industry-standard APIs and datasets and achieved **measurable accuracy gains** even on noisy data, **memory reductions**, and **faster training** on NVIDIA RTX4090 GPUs. We are further planning additional validations to confirm these results.

2. How defensible is your IP portfolio? Could competitors replicate IGL?

- Our core IP covers **novel logic-gate architectures** and **integer-based activation functions**—fundamental layers not covered by existing patents. Several additional patents are pending, with 100+ claims targeting training, inference, and hardware optimization.
- Unlike incremental improvements (e.g., optimizer tweaks), IGL's Boolean logic foundation required reinventing how backpropagation would be computing gradients (by using the

proprietary “chain isolation” technique), and are in fact are replaced entirely. No gradients (as in “gradient descent”) are computed at all. Even if replicated, our first-mover head start and early partnerships will create insurmountable adoption barriers.

3. What’s your go-to-market strategy? How do you displace backpropagation?

- We’re **embedding IGL into NVIDIA’s CUDA stack** via partnerships, enabling seamless integration with existing workflows. Developers will use IGL like a PyTorch layer—no ML/software engineer retraining required.
- We’re first narrowly targeting EdgeAI/TinyML/IoT **high-margin verticals** (e.g., healthcare diagnostics, defense AI) where accuracy on sparse/noisy data and smaller models justifies premium pricing.

4. How does IGL work with emerging hardware (e.g., TPUs, quantum, neuromorphic chips)?

- IGL’s integer math and parallelization thrive on **any SIMD architecture** (GPUs, TPUs, NPU’s).
- IGL 2.0 will integrate with quantum-classical hybrid systems to possibly solve optimization problems multiples faster than classical backpropagation.

5. What’s the risk of open-source alternatives or big tech co-opting IGL?

- Our IP covers **foundational training mechanics**, not just APIs or frameworks. Even if replicated, our GPU/cloud partnerships (e.g., NVIDIA, AWS) lock in distribution.
- We’re considering licensing IGL to hyperscalers under revenue-sharing models, turning potential competitors into partners. This would be similar to ARM’s licensing strategy vs. Intel’s proprietary model.

6. How do you address the ‘black box’ problem for enterprise trust?

- IGL’s Boolean logic gates produce **fully auditable decision trees**. For example, a medical imaging model can trace a cancer diagnosis to specific pixel patterns, not abstract gradients.
- We’re planning to collaborate with global regulatory bodies to align IGL with FDA/EMA AI/ML validation frameworks, de-risking adoption in regulated industries.

7. What’s your customer acquisition strategy?

- We’re leveraging **NVIDIA’s ecosystem** (2M+ developers) via CUDA integration. Our API will be a drop-in upgrade for CUDA users. Standalone training and deployment software is an additional goal.

8. How big is the total addressable market (TAM)?

- Our primary TAM is the **\$150B/year in global AI training costs**. Even 10% capture at 30% margin = \$4.5B EBITDA.

- Secondary opportunities: licensing to chipmakers (15% of GPU sales) and SaaS APIs for generative AI (\$50B TAM by 2030). Custom hardware chips built for processing IGL models is a lucrative long-term goal as well.

9. What's your exit strategy?

- We're positioning MLiglon to be acquired by a **chipmaker** (e.g., NVIDIA \$100B+ revenue, 50x multiple) or go public as the 'ARM of AI.'
- At 2% penetration of the AI accelerator market, we'd be worth \$5B+ (vs. Graphcore's \$3B peak). Conservatively, 10x ROI within 7 years.