🧠 ZOBΛ-30™ — A Room-Temperature Quantum Neural Chip Prototype

⚛️ Photon Reuse | 🧠 Quantum Learning | 🛡️ Ethical Execution

ZOBΛ-30™ is a functional proof-of-concept simulator of a future-forward quantum AI chip designed for room-temperature operation. It brings together advanced quantum neural networks, efficient photonic reuse, and ethics-based execution for a next-gen computing model.

🚀 What Does It Do?

- Simulates a 30-qubit Quantum Neural Network (QNN) trained on logic-based tasks

- Models how a single photon can be reused multiple times to maximize energy efficiency

- Enforces circuit safety using a cryptographic whitelist (ethics filter)

- Demonstrates real results: classification tasks, ethics decisions, reuse cycles

- 100% reproducible & viewable in a notebook — no hardware needed

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🧩 What Makes It Unique?

🔄 Photon Reuse Model
Instead of using a photon only once (like traditional optics), ZOBΛ-30™ simulates a custom reuse-loop architecture that allows each photon to perform multiple operations — up to ~9.5 cycles on average.

🧠 Quantum Learning via QNN
Uses a custom 30-qubit circuit trained to recognize parity logic — proving that reuse does not degrade learning.

🛡️ Ethics Enforcement Layer
A whitelist-based system ensures that only approved logic (circuits) are allowed to execute — mimicking real-world secure AI.

🖼 Media-Ethics Task
Demonstrates the chip's capability to evaluate headlines using logic & ethics, blocking "unethical" ones.

🔍 What's Included in This Project?

- Trained parameters for the QNN

- Code to simulate reuse, circuit logic, and ethical decisions

- A "Live Summary Cell" that outputs reproducible metrics (accuracy, reuse, ethics status)

- GitHub + Colab-ready codebase

⚠️ What's Not Public Yet

This repo is a functional prototype — however, some deeper innovations (like the NTI-CAP integration logic and core reuse-loop design) are not revealed for IP reasons and patent strategy.

We show only enough for labs or collaborators to validate the approach and understand the breakthrough — without giving away core architecture or methods.

🧪 Why It Matters

This is a first step toward:

- Room-temperature, energy-efficient quantum AI

- Trustworthy, ethical AI hardware

- Low-resource, high-efficiency computing for global scale

- A new kind of chip that blends quantum + human values

🛠️ How to Run

Just open the notebook in Google Colab, run all cells, and you'll see:

- 🧠 QNN accuracy (live benchmark)

- ♻️ Avg. photon reuse per cycle

- 🛡️ Ethics decision logs (allow/block)

🤝 Looking For

- Research labs or IIT incubators interested in validation

- Professors or experts for review & feedback

- Patent/legal mentorship

- Future investors or R&D partners