

STYLIANOS ZACHARIOUDAKIS

Athens, Greece | +30 6931377065 | stelios@stelioszach.com | [LinkedIn](#) | [GitHub](#) | [Portfolio](#)

SUMMARY

ML Engineer with 4 research papers, 9 deployed production ML systems, and deep expertise in PyTorch, graph neural networks, LLM inference, and production ML pipelines. Active research in trustworthy medical imaging, LLM+SMT formal verification (90.6% certified accuracy), and speculative decoding on A100 GPUs. Seeking ML/DL roles in Canada.

TECHNICAL SKILLS

- **ML/DL:** PyTorch, GNN, Transformers/HuggingFace, vLLM/EAGLE-3, SimCLR, CLIP, LoRA/PEFT, scikit-learn, LightGBM, River, spaCy, Z3 SMT

RESEARCH PUBLICATIONS

- CEGVR: Counterexample-Guided Verifiable Reasoning with LLM + SMT Solvers..2026 - Preprint; 90.6% certified accuracy via conflict-directed Z3 UNSAT-core feedback - 50-point lift over one-shot baseline; 7,500 evaluation runs on Qwen3-30B-A3B / A100-80 GB, 5-arm controlled study with 3 seeds
- DynaDiff-VLBI: Earned vs Enforced Measurement Consistency in Dynamic VLBI Imaging..2026 - Submitted to MNRAS; Benchmark for dynamic radio-interferometric imaging with the Event Horizon Telescope; PyTorch EMC reference
- TrustQueryNet: Trustworthy Classification Under Noisy Labels with Selective Prediction..2026; 83.5% accuracy on HAM10000 with noise-robust ConvNeXt-Tiny; calibrated selective prediction (ECE 0.0445)
- A Colab-Scale Study of Speculative Decoding..2026; 1.46x speedup with vLLM + EAGLE-3 on A100 80 GB; controlled benchmark across model families

EXPERIENCE

Independent Research

Sep 2025 - Present

ML/DL Researcher

- Designed CEGVR framework achieving 90.6% certified accuracy (+50 pts over baseline) on 1,500 SMT problems; ran 7,500 experiments on A100-80GB
- Built TrustQueryNet: noise-robust medical image classifier (ConvNeXt-Tiny, HAM10000, calibrated selective prediction)
- Achieved 1.46x inference throughput gain benchmarking speculative decoding (vLLM + EAGLE-3) across 4 model families on A100 GPUs
- Developed DynaDiff-VLBI benchmark for dynamic astronomical imaging reconstruction (submitted to MNRAS)

Paphos Medical Association

Jun 2022 - Present

Head Engineer

- Led engineering for AsklepiosMed serving 480 doctors; reduced onboarding time by 60% through automated digital identity (Stripe -> Apple/Google Wallet)
- Architected monorepo (Express + PostgreSQL + React 18) with CI/CD; cut deployment cycle from 2 days to 15 minutes; achieved 99.5% uptime over 12 months

Medihyal Clinic

Jan 2025 - Present

Full-Stack Engineer

- Built clinic booking platform (Next.js 16, Supabase) handling 200+ monthly reservations; integrated Groq LLM reducing manual reorder review time by 80%

PROJECTS

Graph Fraud Command Center

- PyTorch GNN, 14 graph features, 457 req/s, p95=3.3 ms.
- Live simulate + score.

Realtime Fraud Guard

- Streaming scoring (payments/SMS/email), ROC-AUC 1.0, Kafka + Redis Streams.
- Live widget.

AML Graph Investigator

- Graph-native AML, 3K nodes / 51K edges, LightGBM ROC-AUC 0.87.
- Live case explorer.

NYC Subway Anomaly

- Real-time GTFS-RT + online ML (River), 1000+ stations.
- Live Mapbox command center.

EuroSAT DL Benchmark

- 7-paradigm comparison (CNN, TL, SimCLR, CLIP, LoRA); 98.37% best; LoRA 98.22% w/ 0.36% params.

DeID Privacy Studio

- PHI/PII redaction, 20+ entity types, per-label mask/hash/redact policies.
- Interactive studio.

DoubleX Ledger

- SERIALIZABLE double-entry, idempotent postings, FX settlement, 94% test coverage.

LimitForge RLS

- 4-algorithm rate limiter (token bucket / fixed / sliding / concurrency), atomic Redis Lua, 90% coverage.

EDUCATION

National & Kapodistrian University of Athens (NKUA)

Oct 2022 - Jun 2026

BSc, Computer Science

- **Coursework:** Algorithms & Complexity, Deep Learning, Reinforcement Learning, Databases, Operating Systems