VINCENZO DI PERNA

Blockchain Researcher & DLT Systems Engineer

Italy | Open to Europe | Hybrid/Remote
Italian Native | English Fluent
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SUMMARY

Blockchain Systems & Digital Assets Engineer with a PhD in Blockchain & DLT and 4+ years across benchmarking, distributed systems, DeFi/CBDC research and protocol analytics. Designed Lilith, a topology-aware benchmarking framework contributing to ACM DEBS'25 Best Student Paper and IEEE ICBC'25. Targeting engineering, R&D and data roles in blockchain infrastructure, digital-asset analytics and protocol evaluation.

EXPERIENCE

Digital Asset Researcher – DeFi & CBDC Research *2024 – 2025*
Cambridge Centre for Alternative Finance (CCAF), University of Cambridge *Cambridge, UK*

- Contributed to DeFi/CBDC research by co-authoring SSRN outputs, supporting DeFi Navigator UX/debugging, validating on-chain datasets, and translating protocol analytics into reports for academic, institutional and policy stakeholders.

PhD Visiting Student – Blockchain Systems Research *2023 – 2024*
University of Neuchâtel *Neuchâtel, Switzerland*

- Designed Lilith, a topology-aware blockchain benchmarking framework integrating Diablo and Kollaps, and ran large-scale experiments across public/permissioned blockchains, workloads and topologies, contributing to ACM DEBS'25 Best Student Paper and IEEE ICBC'25.

Blockchain Development Intern *2021 – 2022*
SUPSI *Lugano, Switzerland*

- Built a blockchain-based decentralised accounting and document-management prototype integrating Solid Pods and Web3 components for secure, user-controlled digital receipt management.

PROJECTS & DATASETS

Lilith – A Topology-Aware Blockchain Benchmarking Framework *DOI: 10.5281/zenodo.11409100*

- Reproducible benchmarking framework integrating Diablo and Kollaps to evaluate blockchain performance, energy consumption and variability.

CryptoEntropy: Datasets for Economic Efficiency Analysis *DOI: 10.5281/zenodo.15221823*

- Entropy-based dataset for analysing cryptocurrency efficiency across heterogeneous on-chain parameters.

Blockchain Repeatability Dataset for Topology-Aware Benchmarking *DOI: 10.5281/zenodo.15545963*

- Large-scale repeated-run dataset capturing throughput, latency and energy variability across protocols, workloads and topologies.

EDUCATION, CERTIFICATIONS & COURSES

Blockchain & Distributed Ledger Technology — Ph.D. *2022 – 2025*
Università di Camerino *Camerino, Italy*

ICT Solutions Architect — M.Sc. *2019 – 2022*
Università di Pisa *Pisa, Italy*

Computer Systems and Network Security — B.Sc. *2015 – 2019*
Università degli Studi di Milano *Milan, Italy*

Blockchain for Business (B4B) *2023*
SUPSI, USI, FRANKLIN, Città di Lugano *Lugano, Switzerland*

SELECTED PUBLICATIONS & AWARDS

Impact of Network Topologies on Blockchain Performance (Best Student Paper Award) *ACM DEBS'25*
Blockchain Energy Consumption: Unveiling the Impact of Network Topologies *IEEE ICBC'25*
An Entropy-Based Approach To Evaluating The Economic Efficiency Of Cryptocurrencies *DLT'25*
Dynamic Taxonomy a Bridge from DeFi to TradFi *SSRN*

TECHNICAL SKILLS

Programming: Python, Bash, Rust; familiar with C++, Java, Node.js
Data/Storage: MongoDB
Blockchain & DLT: Ethereum, Solana, Algorand, Quorum, DeFi, CBDC, Smart Contracts, Tokenomics
Systems & Benchmarking: Distributed Systems, Network Emulation, Diablo, Kollaps, Performance Evaluation, Energy Measurement
Data & Research: Statistical Analysis, Experimental Design, Reproducible Research, Protocol Analytics
Tools: Docker, Git, GitHub, Linux, VS Code