

VINCENZO DI PERNA

Research Software Engineer |

Distributed Systems, Blockchain & DLT

📍 Italy (EU citizen) · [Open to relocation](#) · Remote / hybrid / on-site

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🇮🇹 Italian · Native | English · Fluent

🌐 [vindipe.github.io](https://github.com/vindipe)

SUMMARY

Research software engineer with a PhD in Blockchain & DLT and 4+ years of experience in distributed systems, automation, and data analysis. Developed Lilith, a topology-aware blockchain benchmarking framework that contributed to an ACM DEBS 2025 Best Student Paper and an ACM DLT 2026 journal article. International research experience across Italy, Switzerland, and the UK. Seeking engineering, R&D, and data roles in blockchain infrastructure and digital-asset analytics.

EXPERIENCE

Doctoral Researcher – Distributed Systems & Blockchain

11/2022 – 06/2026

- Collaborated with an international team across systems research, experimentation, data analysis, technical writing, artifact release, and conference dissemination.

University of Camerino, Italy

Digital Asset Researcher – DeFi & CBDC Research

09/2024 – 10/2025

- Contributed to DeFi/CBDC research, launching DeFi Navigator, validating on-chain datasets, and translating protocol analytics into reports for academic, institutional and policy stakeholders.

Cambridge Centre for Alternative Finance, UK

Visiting Researcher – Blockchain Systems

09/2023 – 06/2024

- Created Lilith, a topology-aware blockchain benchmarking framework, and ran large-scale experiments across public/permissioned blockchains, workloads and topologies.

University of Neuchâtel, Switzerland

Blockchain Development Intern

10/2021 – 01/2022

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

SUPSI, Lugano, Switzerland

PROJECTS & DATASETS

Lilith – A Topology-Aware Blockchain Benchmarking Framework

[GitHub](#)

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

CryptoEntropy Explorer and Datasets for Economic Efficiency Analysis

[GitHub](#) · [Explorer](#)

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

Blockchain Repeatability Dataset for Topology-Aware Benchmarking

[GitHub](#)

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

Decentralised Accounting & Digital Receipt Prototype

[GitHub](#)

- Local demo with configuration validation, mock payment, PDF bill generation.

EDUCATION & CERTIFICATIONS

Blockchain & Distributed Ledger Technology – Ph.D.

2022 – 2025

[Thesis](#) · Comparing Blockchains: Performance Energy, and Economic Efficiencies

University of Camerino, Italy

Blockchain for Business (B4B)

SUPSI, USI, FRANKLIN, Lugano, Switzerland · 2023

ICT Solutions Architect – M.Sc.

2019 – 2022

[Thesis](#) · Decentralized accounting system: Efficient document management system implemented on top of blockchain secure transactions environment

University of Pisa, Italy

Computer Systems and Network Security – B.Sc.

2015 – 2019

[Thesis](#) · Threat Modeling Process: Strumenti per la gestione del processo di modellamento delle minacce

University of Milan, Italy

SELECTED PUBLICATIONS & RECOGNITIONS

Impact of Network Topologies on Blockchain Performance (*Best Student Paper Award*)

ACM DEBS'25 · [DOI](#)

Blockchain Energy Consumption: Unveiling the Impact of Network Topologies

IEEE ICBC'25 · [DOI](#)

An Entropy-Based Approach to Evaluating the Economic Efficiency of Cryptocurrencies

DLT'25 · [DOI](#)

Dynamic Taxonomy a Bridge from DeFi to TradFi

SSRN · [DOI](#)

The Impact of Network Topology on Performance Metrics and Energy Consumption for Blockchains: Towards Repeatable Benchmarking

ACM-DLT Journal · [DOI](#)

CORE TECHNOLOGIES

Programming: Python, Bash; working knowledge of Rust, Go, TypeScript/JavaScript, Java, and C++

Systems & Cloud: Linux, Docker, Docker Swarm, Kubernetes, SSH, Git/GitHub, CI/CD, REST APIs, networking

Data & Research: Statistical Analysis, Experimental Design, Reproducible Research, Protocol Analytics

Blockchain & DLT: Ethereum, Solana, Algorand, Quorum, DeFi, CBDC, Smart Contracts, Tokenomics, DeFi

Benchmarking: Distributed Systems, Network Emulation, Performance Evaluation, Energy Measurement