# Calogero Turco

## EDUCATION AND TRAINING

2017 – 2021 Pisa, Italy

### BACHELOR OF COMPUTER SCIENCE University Of Pisa

Acquired a foundation of knowledge and skills in Computer Science topics.

As a Bachelor thesis, I developed a Privacy-Preserving system for package shipping using Self-Sovereign Identity (SSI). In doing so, I acquired knowledge of the concepts of Blockchain technologies. I learned to use the Hyperledger Indy SDK libraries to interface with the Indy Blockchain designed to work with SSI.

**Level in EQF** EQF level 6 |

**Thesis** Privacy-preserving delivery with Self-Sovereign Identity - An implementation with Hyperledger Indy

2022 – 11/10/2024 Pisa, Italy

### MASTER DEGREE IN COMPUTER SCIENCE ICT SOLUTIONS ARCHITECT University Of Pisa

Acquired knowledge related to Blockchain and Peer To Peer Systems. In particular, I learned the Bitcoin protocol, how to analyze blockchain transaction data and programming Ethereum Smart Contracts.

I also acquired knowledge of Microservices, Communication technologies, Datacenter, Docker, Compression, Algorithms, Parallel programming, Distributed systems, and Embedded systems

As a Master Thesis, I designed and implemented a system exploiting Blockchain-based Self-Sovereign Identity (SSI) and AI tools to prevent misinformation over Online Social Networks using Verifiable Credentials. Specifically, I worked with Decentralized Identifiers (DIDs) on the Ethereum Blockchain and gained expertise on the Veramo library to manage the SSI workflow.

**Final grade** 110 Cum Laude | **Level in EQF** EQF level 7 |

**Thesis** Assessing the Trustworthiness of Social Content Through Self-Sovereign Identity

01/11/2024 – CURRENT Pisa, Italy

### PHD COMPUTER SCIENCE University Of Pisa

Currently researching and developing applications of Self-Sovereign Identity (SSI) in real-world systems, paired with blockchain technology to ensure trust and privacy

**Field of study** Self-Sovereign Identity, Trust, Blockchain, Internet of Things , Online Social Network | **Level in EQF** EQF level 8

## LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

| | UNDERSTANDING | | SPEAKING | | WRITING |
|---|---|---|---|---|---|
| | Listening | Reading | Spoken production | Spoken interaction | |
| **ENGLISH** | C1 | C1 | B2 | B2 | B2 |

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

## SKILLS

**Programming Languages**

Java | C++ | Javascript(Nodejs, ExpressJs) | C | Python | SQL | Haskell

**Tools**

Overleaf & LaTeX | GIT version control, Linux Command | Word/PowerPoint capabilities

**Software libraries**

Keras | ScikitLearn | TensorFlow

**Distributed Ledger / Blockchain knowledge**

Decentralized identifiers (DIDs) | Hyperledger Indy | Veramo | Bitcoin | Solidity | Ethereum | Self Soverign Identity

**System Programming**

POSIX Threads Programming | Parallel computing (OpenMP) | FastFlow

## PUBLICATIONS

2023

**Self-Sovereign Identity for Privacy-Preserving Shipping Verification System**

Paper published in ICBTA '22: Proceedings of the 2022 5th International Conference on Blockchain Technology and Applications. This work was based on my Bachelor's Degree Thesis and illustrates a system that exploits the concept of Blockchain-Based Self Sovereign Identity (SSI) for providing digital identity, trust, and privacy in the context of a Shipping Verification System in supply chain management. The paper provides a good system's performance evaluated on a private Hyperledger Indy blockchain network and a public Sovrin Foundation testnet

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*Il sottocritto Calogero Turco, ai sensi e per gli effetti degli articoli 46 e 47 e consapevole delle sanzioni penali previste dall'articolo 76 del D.P.R. 28 dicembre 2000, n. 445 nelle ipotesi di falsità in atti e dichiarazioni mendaci, dichiara che le informazioni riportate nel presente curriculum vitae, corrispondono a verità. Autorizza il trattamento dei dati personali ai sensi dell'art. 13 del D.Lgs. 196/2003 e del Regolamento UE 2016/679 (GDPR).*

Pisa , 25/03/2025

Calogero Turco