

Francisco Correia de Sousa

|  franciscomcsousa |  franciscomcsousa |  francisco-sousa.pt |
|  francisco.m.c.sousa@gmail.com |

SUMMARY

MSc in Computer Science and Engineering with focus on **distributed systems**, **network security** and **fault-tolerant protocols**. Experience designing Byzantine-resilient distributed systems and asynchronous protocols.

WORK EXPERIENCE

Research Intern - INESC-ID

June 2024 - Present

- Designed Chia-Async, an asynchronous alternative to the Chia blockchain.
- Developed an **Asynchronous DRB** (Distributed Random Beacon) to remove the synchronism assumptions of the protocol.
- Evaluated the protocol's latency, throughput and fault-tolerance under network failures and byzantine nodes.

Teaching Assistant - IST Computer Science Department

November 2024 - Present

- Teaching lab sessions of **Distributed Systems** (Spring 2025) and **Operating Systems** (Fall 2024 & Fall 2025).
- Assisted students in concurrency, synchronization, OS fundamentals and distributed protocols.
- Graded assignments of multiple classes of 20+ students.

PROJECTS

HDS Serenity

[Link to Demo](#)

A simplified permissioned blockchain system with high dependability guarantees using IBFT as the consensus protocol.

TheCork

[Link to Demo](#)

Full stack application with special emphasis in encrypted communication, authentication and secure data persistence. Developed using Flask, React, Nginx and MariaDB.

EDUCATION

Instituto Superior Técnico - Computer Science Department

Completed Nov. 2025

Computer Science and Engineering **MSc**.

GPA: **18/20**

Thesis: "Chia-Async: Towards Asynchronous Proof-of-Space"

Graded: **19/20**

Instituto Superior Técnico - Computer Science Department

Completed June 2022

Computer Science and Engineering **BSc**.

GPA: **15/20**

SKILLS

Technical Areas

Distributed Systems, Network Security, Low-level programming

Programming

C, C++, Python, Java, C#, Rust, SQL

Tools & Systems

Linux, Git, Docker

Language Fluency

Portuguese (Mother Tongue), English (Full Working Proficiency)