
Work Experience

Internship

Nethermind

June of 2023 - September of 2023

- Worked on Starknet.go

Junior Researcher

Release Lab

September of 2022 - September of 2023

Universtiy of Beira Interior

- Working on Master's thesis.
- Received Research Grant

Freelancer Software Developer

Multiple Companies

October of 2019

- Developed management tools, bots, managed servers and databases on request for multiple companies and customers.

Education

Master of Science in Computer Science

University of Beira Interior

(Currently top 3 in class)

2021 - 2023

Bachelor of Science in Computer Science (GPA: 13/20)

University of Beira Interior

2018 - 2021

Secondary eduction in Sciences and Technologies (GPA: 16/20)

Afonso de Albuquerque High School

2013 - 2018

Relevant Projects

Research on Blockchain Consensus Algorithms

Master's Thesis

2023

- Blockchain, Distirbuted Systems, Consensus Algorithms, Tezos, Functional Programming
- Tezos Node, OCaml language
- Implementation of a new protocol/consensus algorithm for the Tezos Blockchain. Future work: Development of a suite of tools to test a consensus algorithm on Tezos.

Pascal Compiler

Compiler and Language Design Class

2022

- Language Design, Parsing, Lexing, Assembly code generation
- OCaml language, OCamllex, OCaml Menhir, X86_ Assembly
- Developed a implementation of a Pascal Compiler that generates x86_64 assembly code.

Research on Distributed Algorithms

Bachelor's Thesis

2021

- Distributed Systems, Distributed Data Structures, Mutual Exclusiion, Concurrency
- Go Language
- Studied the original "Arrow Distributed Directory Protocol" and developed a implementation of a node in Go, to test the algorithm in a distributed setting. Implemented a visualization of the state of the network (and the distributed data structures), and Ownership/Requesting/Arrival events history.

Skills

Programming	Go, OCaml, Rust, Python, C, Java, JavaScript, Bash, SQL, HTML, CSS, X86_64 ASM
Technical Skills	Linux, Git, Smart Contracts, Web Development, Data Structures and Algorithms, CI/CD, Containerization, Relational and Non-Relational Databases, RESTful APIs, Debugging and Troubleshooting
Soft Skills	Communication and interpersonal skills, Problem-solving and critical thinking, Teamwork
Languages	Portuguese (native speaker), English (fluent), Spanish (beginner)

Interests

Technical Interests

Distributed Systems, Consensus Algorithms, Blockchains, Functional Programming, Compilers and Language Design, Computer Logic and Theory, Security of Systems and Software, Formal Language Verification, Operating Systems, Computer Security

Past Activities

Music Formation, includes Saxophone Classes (5 years)
Federated in Basketball (3 years)

Other Hobbies/Interests

Fishing, Beekeeping, Farming, Cycling

Extras

SWERC 2023

South Eastern Europe Programming Competition
Politecnico Milano, Milan, Italy

February 2023

Solana Breakpoint Conference 2022

Received Student Fellowship Ticket
Lisbon, Portugal

November 2022

MIUP 2022

National Programming Competition
Coimbra University, Coimbra, Portugal

October 2022