

Rui Fernandes

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EXPERIENCE

Research Engineer

Sept. 2023 – Aug. 2025

Max Planck Institute for Security and Privacy

Bochum, Germany

- Worked on the implementation and formal verification of post-quantum digital signature schemes as part of the [Formosa Crypto](#) project.
- Co-authored a paper accepted for publication at TCHES 2026.
- **Languages:** C

Research Assistant & Teaching Assistant

Jan. 2022 – Dec. 2022

Faculty of Sciences of the University of Porto

Porto, Portugal

- Worked on the development of a knowledge base to model overtaking scenarios using synthetic datasets as part of the [THEIA](#) Project, a collaborative initiative between Bosch and the University of Porto.
- **Languages:** Python

EDUCATION

Faculty of Sciences of the University of Porto

Porto, Portugal

Master's Degree in Information Security

Sept. 2021 – Jun. 2023

- **Thesis:** “*Speculative Execution Resilient Cryptography*”

University of Minho

Braga, Portugal

Bachelor's Degree in Software Engineering

Sept. 2018 – Jul. 2021

ACADEMIC PROJECTS

[Distributed Auction System](#)

- Decentralized auction system featuring a public ledger over a Kademlia-based P2P network, supporting both Proof-of-Work and Proof-of-Stake consensus mechanisms.
- **Technologies:** Java, gRPC

[Password Manager](#)

- Secure password manager implemented using a Java Card applet for cryptographic operations, complemented by a Java host application for user interaction and storage in a MySQL database.
- **Technologies:** Java, Java Card Platform, MySQL

TECHNICAL SKILLS

Programming Languages C, C++, Java, Python

Web Development: Spring Boot, SQL, ReactJS

Developer Tools: Docker, Kubernetes, Github Actions

Languages: Portuguese (native), English (C2), German (A2)