Daniel Filipe Nunes Silva

COMMUNICATION SYSTEMS ENGINEER
SPECIALIZED IN CYBERSECURITY

PERSONAL INFO

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danielementary.me

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Phone Number
+41 76 545 00 24

Location
Lausanne, Switzerland

PERSONALITY

Traits
Honesty
Critical Thinking
Enthusiasm

Interests
Specialty Coffee
Watchmaking

EDUCATION

MSc in Communication Systems at EPFL　　　2019-2022
Strong background in cryptography, privacy-enhancing technologies,
formal verification, and interest in image processing and machine learning

BSc in Communication Systems at EPFL　　　2016-2019
Strong background in mathematics, information theory, algorithms,
and interest in visual computing and data science

EXPERIENCE

R&D Software Engineer at Debiotech SA　　　SINCE AUG. 2022
Develop certified software for medical applications
interfacing with cloud services and Bluetooth devices in Dart/Flutter

Cryptography Engineer at Nym Technologies SA　　　SEP. 2021-MAR. 2022
Design and implement Rust applications for the Nym network
leveraging attribute-based credentials and zero-knowledge proofs

Software Engineer at PROGIN SA　　　SUMMER 2020
Develop a dedicated construction cost estimating software in C#
and a SQL database suiting the specific needs of the company

Research Intern at Kudelski Security　　　SUMMER 2019
Build a proof of concept extending FFmpeg C source code to perform
motion detection on video streams encrypted with functional encryption

Low-Voltage Systems Developer at EPFLRT　　　FEB. 2019-MAR. 2020
Integrate several sensors in EPFL's Formula Student racing car
in collaboration with the different divisions to allow data acquisition

PROJECTS

Formally Verified Prefix-Free Codes
Implement a prefix-free encoder-decoder pair in Scala and formally prove
the implementation for correctness using the Stainless framework

Zero-Knowledge Circuit Evaluation with Preprocessing
Implement the ZKB++ protocol featuring KKW preprocessing, which enables
privacy-preserving computations, in Go and using the Lattigo library

Software Security Labs
Practice code audit, unit testing, and fuzzing. Play CTFs such as exploitation,
reverse engineering, and forensics

COMPETENCIES

Programming
Python, Go, Rust, C, C#, Java, Dart/Flutter
Scala, Stainless, Coq
Git, CI/CD, Linux, Shell Scripting, Vim

Interpersonal Skills
Collaboration
Adaptability
Active Listening

Competitions

ZK Hack III	2022
Google Hash Code	2018/2019/2021
LauzHack	2018
EPFL Santa's Algorithmic Challenge	2017

Languages

French	Native
Portuguese	Native
English	C1
German	B2