

Daniel Filipe Nunes Silva

COMMUNICATION SYSTEMS ENGINEER
SPECIALIZED IN CYBERSECURITY



PERSONAL INFO

Website

danielementary.me

Email

danielementary@proton.me

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 Intern 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

Competitions

Google Hash Code 2018, 2019 and 2021
LauzHack 2018
EPFL Santa's Algorithmic Challenge 2017
Swiss Olympiad in Informatics 2016

Interpersonal Skills

Collaboration
Adaptability
Active Listening

Languages

| | |
|------------|--------|
| French | Native |
| Portuguese | Native |
| English | C1 |
| German | B2 |