VINCENT WERNER

Embedded Software Developer

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EXPERIENCE

Embedded Software Developer

STMicroelectronics

Since October 2021 Grenoble, FR

C Python Qt Rust

- Firmware Development for STM32WBA, STM32WB, and STM32WL Microcontrollers (BLE, LoRa)
- Secure Bootloader Development
- Desktop Application Development for Board Production Testing with Qt and Python
- Desktop Application Development for In-House Board Testing with Tauri, Diesel, and Rust
- Firmware Implementation for EEMBC Benchmarks: CoreMark, ULPMark, and SecureMark

PhD Candidate in Computer Science

CEA - Leti

Oct 2018 - Oct 2021 Grenoble, FR

C++ C Python

- Development of New Strategies to Identify and Exploit Vulnerabilities on Microcontrollers
- Development of a Fault Injection Simulator based on Hardware Emulation and LLVM
- Design of a Budget-Friendly Glitch Platform with STM32H7, Featuring Bayesian-Based Automated Glitch Optimization

Full Stack Developer

Sopra Steria

Sept 2016 - Aug 2017 Rennes, FR

Java AngularJS

- Web Application Development using AngularJS and Java

Intern in Software Engineering

Airbus

Feb 2016 - Jul 2016 Toulouse, FR

C Python

- Desktop Application Development for Video Acquisition with Multiple Infrared Cameras

EDUCATION

Phd in Computer Science

Université Grenoble Alpes

Oct 2018 - Oct 2021 Grenoble, FR

Postgraduate Program in Cybersecurity

CentraleSupélec - IMT Atlantique

Sept 2017 - June 2018 Rennes, FR

MEng in Electronics and Computer Science

INSA

Sept 2011 - June 2016 Rennes, FR

PROJECTS

CELTIC
A fault injection simulation tool built around a modular emulator for RISC architectures (ARM, RISC-V, etc.). The tool is optimized for accelerated simulation (multithreading, JIT) while maintaining ease of use through Python wrappers.

Low Cost Glitch Platform
A cost effective glitch platform based on artificial intelligence to assist vulnerability analysis under black-box conditions.

COMPETENCES

Languages & Frameworks

C C++ Python Qt Rust

Microcontrollers

STM32 NXP Kinetis Raspberry Pi Arduino MSP430

LANGUAGES

French
Mother tongue

English
Read, spoken, written