▬ Career

since 2022   **Foundation of: Büngener Software**, *embedded system development and coding forges, and grey hat.*

2018 - 2022   **Project management**, *NRW*, Specialisation electrical engineering, *Realisation of major projects with an order volume of up to € 5 million.*
Example orders: Planning and implementation of a fire protection concept for a new research institution / Modernisation of the data network of two hospitals / Server security at Amazon Aachen

2019-2021   **State-certified technician**, *Aachen*, Berufskollege für Gestaltung und Technik, .
Specialisation electrical engineering

2013-2021   **Elektroniker für Energie und Gebäudetechnik**, *Bremen, Aachen, Köln, Düren*, Field of activity, *Automation of office and industrial complexes.*
Specialisation electrical engineering

2006-2013   **Chef**, *Chef de Partie Entremetier*, .

Freelancer Projects

2022 -2023   **Embedded Software Development**, *Realisation of various software and control solutions in the hybrid maritime sector*, amperetta GmbH, CAN; C++/C; WE ICCS SDK+.
Test procedures, prototype development

2024   **freelance writer**, *Author for print and online trade magazines*, webemedia GmbH.

since 2022   **QA and Support**, *QA and support in my specialised areas of embedded systems, building automation and programming*, velpTec GmbH, C++/C, Embedded Development; Microcontroller/IoT; JAVA; node; Linux; SPS.

2021   **Embedded Software Development**, *Automated magnet positioning*, Forschungszentrum Jülich, https://youtu.be/MXNOVTF3utE.
Teilchenbeschleuniger COSY

2020   **grey hat**, *I help companies to improve their IT security and prevent cyber attacks. As a bug bounty hunter, I identify vulnerabilities before they can be exploited by criminals. In this way, I protect sensitive data and ensure smooth business operations.*.

some projects of interest

Secure IoT Gateway with Intrusion Detection System (IDS), *Development of a secure IoT gateway with an integrated intrusion detection system. The gateway is based on a microcontroller with a real-time operating system and uses machine learning algorithms to detect anomalies in network traffic.* , unpublished project.

Penetration Testing Framework for Industrial Control Systems (ICS), Development of a penetration testing framework for industrial control systems. The framework enables the simulation of cyber attacks on ICS components and helps to uncover vulnerabilities in the security architecture., internal project.

Secure Communication Protocol for Automotive CAN Bus, Design and implementation of a secure communication protocol for the CAN bus in the automotive sector. The protocol uses encryption and authentication to protect communication between ECUs from manipulation and eavesdropping., unpublished project.

user administration, Security analysis of IoT protocols such as MQTT and CoAP, internal project.

Reverse engineering and analysis of malware for embedded devices.

Achievements, Interests

wip	CompTIA Security+
2024	CompTIA Network+
2024	CompTIA Linux+
2023	CompTIA A+
2023	Security for embedded systems
2021	CISCO CCNA 1
2020	TIA Portal
2014	Ethical Hacking

Skills

Programming Languages

proficient:	C / C++, JAVA, python, SQL, SSH
familiar:	javascript (various), processing, LaTex

Software and Tools

Tools:	TIA Portal, WE ICCS SDK+
OS:	Linux, Windows

Equipment/Hardware Skills

Development Boards:	Experience working with various development boards such as Arduino, Raspberry Pi, STM32, ESP32, CDM-A16
Test Equipment:	Proficient in using oscilloscopes, multimeters, logic analyzers, and other electronic test equipment for troubleshooting and analysis.
Debugging Tools:	Knowledge of using JTAG and SWD interfaces, as well as debugging software like GDB for low-level debugging.
Sensors:	Experience in integrating and programming various sensors (e.g., temperature, humidity, accelerometer, gyroscope, GPS) into embedded systems.
Protocols:	Familiarity with implementing communication protocols such as I2C, SPI, UART, USB, Ethernet, CAN, Bluetooth, Wi-Fi, etc.
Soldering	Ability to solder both through-hole (THT) and surface-mount (SMD) components.
Automation	SPS, KNX, DALI, Modbus, BACnet

Languages

Deutsch:	First Language	*(Strong writing skills)*
English:	1 year journeyman as Chef, exchange completed	*(European Union Reference Level C1)*