

Summary

Senior systems engineer specialized in high-performance automotive middleware. 7+ years in C++/Python/Rust across DDS/ROS, ECU comms (SOME/IP, CAN/UDS/ISOBUS), and embedded Linux/QNX. I build reliable comms stacks, code-gen tooling, and integration test infra that ships safely on real vehicles.

Work Experience

- June 2022 - present **Senior Software Engineer**, APEX.AI GMBH, Germany
- Part of Apex.OS middleware team of about 10 persons, focused in the support for communication with external ECUs and integration of different DSL with the code generation infrastructure. (vsomeip, cantools, ISOBUS, UDS, C++17)
 - Implementation of the internal integration testing framework. (Docker, Bazel, Boost.Asio, libssh2)
 - Supporting clients on porting their ROS applications to Apex.OS.
- 2020 - 2022 **Software Engineer**, ESR LABS GMBH, Germany
- Contribution to Northstar, an open-source container runtime written in Rust. (POSIX, Cgroups, Tokio)
 - Design and implementation of the Intrusion Detection System, an embedded Linux application reacting to concurrent signals (Android's messaging and concurrency, Rust).
- 2019 - 2020 **Software Engineer**, AUTONOMOUS INTELLIGENT DRIVING GMBH, Germany
- Part of the Software Platform Team, a group of about 9 persons dedicated to the development of Fusion, a Vehicle Middleware inspired by Qt.
 - Mainly contributed to the implementation of object method calls and object interface synchronization. (C++11, RTI Connext DDS)
- 2018 - 2019 **Project Engineer**, TTTECH AUTO AG, Germany
- Worked in a self-organized team of 10 persons supporting BMW's Autonomous Driving Project.
 - Negotiation and planning of units of work for every sprint (LeSS)
 - Mostly contributed to the implementation of the *Keep Lane Assistant* (C++14, ROS).
- 2016 - 2018 **Software Engineer**, EVOSOFT GMBH, Germany
- Part of small team of 5 persons, responsible to implement a real-time monitoring system for electrical substations (C/C++, DPDK, RTLinux).
 - Setup of Continuous Integration and Testing for different microcontrollers (Yocto-Linux, LAVA, Python, Go)
- 2015 - 2016 **Working Student**, SIEMENS CORPORATE TECHNOLOGY, Germany
- Implementation of embedded engine for semantic information processing of *Internet of Things* descriptions. (C/C++, Cortex-M4, CoAP).
- 2012 - 2013 **Software Engineer**, TALPOR SOLUTIONS C.A., Venezuela
- Web Development using Python (Django).
- 2008 - 2011 **System Administrator**, Universidad Simón Bolívar, Venezuela
- Network and System administration (DHCP, DNS, E-Mail, NFS, LDAP).
 - Teaching Linux and C Programming courses.

Technical skills

- Languages C/C++17, Rust, Python
- Software Git, Bazel, CMake, GDB, Linux, Neovim

Education

- 2013-2016 **M.Sc. Informatics**, Technische Universität München, Germany
Major: Computer Vision and Machine Learning.
- 2006-2012 **B.S. Computer Science and Engineering**, Universidad Simón Bolívar, Venezuela
Award: 2011's Best Computer Science thesis - IEEE & Ineectra Venezuela.

Languages

- Spanish Mother tongue
- English Professional working proficiency
- German Intermediate proficiency (B1)

Hobbies

Video & board games, coffee and horror movies.