

About

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- Software engineer with 20+ years of experience in embedded computing
 - Focus on embedded software development
 - Expertise in classic AUTOSAR and automotive diagnostic
 - Thrive on leading, mentoring and working with multicultural teams
 - Strong communication skills in German (C2), English (C2), French (B2) and Italian (native)

Employment

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| Expert | Elektrobit GmbH (Germany) | 2012 – |
| Developing software for automotive electronic control units based on classic AUTOSAR | | |
| Software Engineer | Magneti Marelli / Da Vinci Engineering GmbH (Germany) | 2009 – 2012 |
| Developed software for automotive instrument clusters based on dual microcontroller architecture | | |
| Software Engineer | Dune Srl (Italy) | 2001 – 2009 |
| Implemented algorithms on digital signal processors (DSP) for signal processing applications | | |

Education

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| Rome (Italy) | Sapienza University | 1993 – 1999 |
| <ul style="list-style-type: none"> · <i>Laurea cum Laude (110/110)</i> in Electronic Engineering (Master's degree, July 1999) · Faculty of Electronic Engineering and InfoCom Department | | |

Projects

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- **Diagnostic Expert Group** (EB, 2022): Leading the expert group in solving project related diagnostic issues
 - **High Computing Performance ECU** (EB, 2020 – 2023): Providing premium AUTOSAR support (Audi AG)
 - **Front Range Radar** (EB, 2017 – 2019): Integrated AUTOSAR basic SW modules and Ethernet/CAN communication stacks (BMW AG)
 - **Generic Bootloader** (EB, 2012 – 2015): Developed and maintained the generic flash bootloader (VW AG)
 - **Instrument Clusters** (Magneti Marelli, 2009 – 2012): Implemented end of line routines driving HW actuators and sensors (Porsche AG)
 - **Wide Open/Super Het Receivers** (Dune, 2008 – 2009): Developed in C++ the control SW running on a PowerPC board with VxWorks real-time OS (Elettronica SpA)
 - **Voice/Data Crypto Radio** (Dune, 2004 – 2009): Programmed in assembler on a fixed-point DSP the generation of digital (300, 600, 1200, 2400 bps) and analog (DQPSK modulation) waveforms (Leonardo SpA)
 - **EU Projects** (Dune, 2001 – 2003): Evaluated signal processing algorithms for 3G terminals in MATLAB

Additional Experience

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- **Patent Examiner** (2016 – 2017) at the European Patent Office (EPO) in The Hague (The Netherlands)

Skills

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- Classic AUTOSAR with focus on the diagnostic stack (Dcm, Dem)
 - ISO and SAE diagnostic protocols 14229 (UDS), 13400 (DOIP), 15031 (OBD), J1979-2 (OBDDonUDS), J1979-3 (ZEVonUDS)
 - Embedded C (proficient); Lua, Python, C++, MATLAB, Assembler (prior experiences)
 - EB tresos Studio, Wireshark, Git, L^AT_EX, MS Office

Portfolio

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- **Python code snippets** <https://www.mathsophy.com/python-codesnippets>
 - **C++ book** <https://www.mathsophy.com/cpp-codesnippets>
 - **Binary search trees** <https://www.mathsophy.com/post/binary-search-trees-and-avl-trees>