Personal Data:

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Year of birth: 1964

Nationality: German

Marital status: single, no children

Languages: German, native speaker
English, fluent written and spoken
French, fluent
Swedish, fluent

Education: Studies of computer science with minor subject electrical engineering at the University of Dortmund, Germany
Diploma thesis: Inductive Theorem Proving for Horn Clauses
Diploma in 1991

Scientific staff at the Max Planck Institute for Computer Science, Saarbrücken, Germany
2000 Phd as Dr.-Ing. (Computer Science) at the University of Saarland, Saarbrücken, Germany, Thesis: Superposition Theorem Proving for Commutative Algebraic Theories

Computer experience since: 1980

Available: September 2020

Up-to-date CV at: http://www.jstuber.net/stuber-cv-en.doc

GDPR: I hereby agree to the use of my data for the purpose of recruiting.

IT-Experience:

Speciality:	**Multi-year industrial experience in embedded systems**
Hardware:	NXP LPC43xx, LPC11Cxx, ARM Cortex-M4/M0, ARM7TDMI, TI DSP C28xx, PowerPC, Renesas R8C, Atmel AVR, Z80
Operating systems:	Linux (networking, shell, embedded software, kernel drivers, user since 1992), Keil RTX
Programming languages:	C/C++ (9 years industry experience) Java (3 years industry experience) Rust, Assembler, Python
Development tools:	gcc, gdb, make, diff, autotools, patch Eclipse, Ant, JUnit, JMock, JCoverage, EMMA, Checkstyle, jad git, Subversion, Polarion, PTC (MKS), CVS Keil MDK, TI CodeComposer, IAR Workbench, Renesas HEW, Visual C++ PCAN-Explorer, Wireshark, CANoe, Optolyzer Rhapsody, Rational Rose, Enterprise Architect CM Synergy, Change Synergy LTSpice Oszilloscope, logic analyzer, function generator, soldering iron
Data communication:	Ethernet, IPv4, UDP, TCP, ZigBee, CAN, Bluetooth, USB, SPI, I2C, TCN, MOST, FlexRay, LIN
Standard software:	MS Office, LibreOffice (OpenOffice), Lotus Notes
Technical focus:	Software development for embedded systems Deeply embedded low-level system programming Data communication
Industries:	Solar and battery inverters, welding, gas metering, automotive, rail, cash handling
Previous occupations:	Researcher in computer science Temporary assistant professor (ATER in France)

Industry Projects:

7/2019 – 6/2020

SMA Solar Technology AG, Niestetal / Kassel
Software Developer

Task:
Changes and extensions of firmware for battery and solar inverters based on TI DSP C2837x processors, among other things to satisfy new normative requirements, documentation.
System environment:
µC/OS
Programming languages:
C
Development tools:
TI Code Composer Studio, git, gclient, Bitbucket, Jira, PC-Lint

10/2016 – 03/2018

dSPACE GmbH, Paderborn
Software Developer

Task:
Collaboration on system software for realtime Linux on an embedded PC: 100BASE-T1 Ethernet, UDP socket communication, integration Congatec driver, USB stick for system recovery, UEFI boot, configuration of a Marvel 88E63xx Ethernet switch, extension of C++ system software, debugging a kernel driver, network configuration IPv4, VLAN
System environment:
Linux RT_PREEMPT, Busybox, Congatec Embedded PC, dSPACE, Simulink
Programming languages:
C, C++, Bash, Python
Development tools:
Eclipse, GCC, dSPACE Tools, PTC

03/2016 – 06/2016

Elster GmbH, Lotte
Test Analyst

Task:
Maintenance of tests for intelligent gas meters:
- Tests according to the Great Britain Companion Specification
- Analysis of test results (ZigBee Smart Energy, IEEE 802.15.4)
- Development of software for generating prepaid top-up codes for tests (AES-GCM, Elliptic Curve Diffie-Hellman)

System environment:
Gas smart meter, ZigBee, Microsoft Windows, Linux
Programming languages:
Python
Development tools:
Ember Insight Desktop, Polarion

08/2012 – 11/2015

Cloos Innovations GmbH, Herborn
Software Developer

Task:
Collaboration on software for welding power supplies:
- Porting of control software from TI DSP TMS320F2812 to NXP LPC4357 Cortex-M4/M0 multicore
- Development of hardware drivers on the LPC4357 (external ADC/DAC via SGPIO/SPI, H bridge output driver using the SCT, tests with a Sigma-Delta-ADC)
- Software maintenance on TI DSP F2812 and NXP ARM7TDMI LPC2378/LPC2478 (bug fixing, optimizing timing, control systems, signal processing)
- Measuring electrical resistance and inductance of the welding circuit by the power source (design and implementation of the measurement method, validation through reference measurements)
- Software for a hardware module using an LPC11C14: soft start by phase cutting, measuring grid frequency, grid voltage, temperature measurements using an NTC, communication via CAN
- TCP via Anybus CompactCom M30/M40 Socket Interface

System environment:
NXP ARM microcontrollers, TI DSP, Keil RTX, CAN
Programming languages:
C, Assembler
Development tools:
Keil MDK, TI CodeComposer, Eclipse, PEAK PCAN-Explorer, Subversion, Git
Oscilloscopes (LeCroy, Tektronix, Agilent), function generators (Tektronix, Agilent), logic analyzer (Logicport)

12/2011 – 05/2012

Wincor-Nixdorf International GmbH, Paderborn, Germany
Software Developer

Task:
Collaboration on a test system and tests for CEN/XFS interfaces (CDM, CIM) for cash recycling systems.

System environment:
Windows PC, cash recycling systems.
Programming languages:
C++
Development tools:
Eclipse, Visual C++, MKS

01/2010 – 05/2011

Continental Automotive GmbH, Wetzlar, Germany
Software Developer

Task:
Development of the phone book and call list function for an automotive head unit, in particular implementation of efficient data structures for sorting and fast access.

System environment:
Renesas SH2A processor, µ-Itron, Bluetooth module.
Programming languages:
C/C++, Java for code generation
Development tools:
Eclipse, Renesas C/C++, Renesas HEW, Visual C++, Rhapsody, CM Synergy, Change Synergy

07/2008 – 12/2009

Bombardier Transportation GmbH, Mannheim, Germany
Software Developer

Task:
Maintenance of rail vehicle diagnosis system components and associated tests, among other things porting of VxWorks/Visual C to Linux/gcc.

System environment:
Embedded x86-, PowerPC- and ARM systems.
Proprietary frameworks based on VxWorks or Linux and QT.
Programming languages:
GNU C/C++
Development tools:
GNU Make, GNU compiler tools, Visual C, Eclipse, coLinux, Wireshark, Mitrac Tools

04/2008 – 05/2008

Delphi Deutschland GmbH, Wiehl-Bomig, Germany
Software Developer

Task:
Development of the software for a prototype of an automotive interior illumination with LEDs.
- 14 channel software PWM for dimming the LEDs
- Reading keys via A/D inputs
- Integration of a LIN driver

System environment:
Renesas R8C/20 microcontroller, LIN
PC with CANoe for LIN simulation
Programming languages:
IAR C
Development tools:
IAR Workbench, GNU Make, Eclipse, Subversion
CANoe, Intronix logic analyser

09/2007 – 02/2008

TÜV NORD Mobilität, Essen, Germany
Software Developer

Task:
Collaboration on a test system for interoperability testing of FlexRay communication controllers:
- Implementation of the code generation for controlling the tests
- Implementation of the Flexray time synchronization for the test control boards

System environment:
PC with Java 6 and Eclipse
Test control board with Linux controller, 24 bit spezial purpose processor in an FPGA, AD9954 for clock manipulation
Various microcontrollers / FlexRay communication controllers (NEC, FreeScale, TI, Infineon)
Programming languages:
Java, Assembler
Development tools:
Eclipse, Subversion, Bugzilla, JUnit
Oscilloscopes (LeCroy, Yokogawa)

03/2005 – 08/2007

Siemens VDO, Wetzlar, Germany
Software-Developer

Task:
Various tasks for programming MOST or BAP/CAN device drivers for a high-end automotive multimedia system:
- Implementing the aktivation of DTCP between DVD changer and amplifier
- Design and implementation of a driver for attaching iPods or USB memory devices via MOST
- Integration of a driver for BlueTooth audio
- Implementing and maintenance of a driver for attaching iPods or USB devices via BAP/CAN

System environment:
VxWorks, Java 1.1, PersonalJava + extensions, OSGi, Java Media Framework
Programming language:
Java
Development tools:
Eclipse, Ant, JUnit, JMock, JCoverage, EMMA, Checkstyle, DJ, jad, Optolyzer, Rational Rose, Enterprise Architect, CM Synergy, Change Synergy, Beyond Compare