



Profile

Mathias Weber

Focus activities to date:

- Software-Development / -architectures
- DevOps
- Cyber Security

abstract: independent, solution- and IT-oriented generalist, who solves complex problems with fast comprehension and communication skills.

Personal Details

Year and place of birth	1983 in Munich
Personal status	married, 2 children
Professional qualifications	2010 Dipl.-Ing. (FH) Elektrotechnik und -informationstechnik (technische Informatik) 2010 Software Developer and Project Manager Automotive (HiL-) Test stands 2013 Sales and Marketing Coordinator 2017 Freelancer
Languages	German (first language) English (business fluent)

Contact Details

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Extract project references

2018 – present Contracted for BMW AG	Business Consultant <ul style="list-style-type: none">• Analysis and documentation of the autonomous driving development toolstack• Assessment and communication of needs for action for the further architecture/implementation of the toolstack.• Contact person for technical tooling aspects for classification and qualification according to ISO26262• Support for implementing DevOps tools
2017 – present Contracted for Veoneer Germany GmbH	Cyber Security Consultant <ul style="list-style-type: none">• Support for the product cyber security strategy for ECUs• Architecture-Definition and implementation of a Blockchain-based platform for the protection of internal intellectual properties• Architecture definition and implementation of a key lifecycle management platform for a variety of cryptographic methods to secure the development, rollout and lifecycle management of ECUs
2017 – 2018 Contracted for in-tech GmbH	Business Consultant <ul style="list-style-type: none">• Development of a business plan to secure a new business field• Support in the first steps of implementing the new business strategy<ul style="list-style-type: none">○ Marketing○ Sales○ DevOps
2018 Contracted for MRK Systeme GmbH	Software Architekt <ul style="list-style-type: none">• Architectural definition for the automation of a development teststand for eBikes• Implementation of the Automation Software in Visual C++ and National instruments
2017 Contracted for Airbus Helicopters	Business Consultant <ul style="list-style-type: none">• Analysis and documentation of the development toolstack for the software creation of electronic components• Preparing for an upcoming certification of functional safety

Career history

11.2013 – 09.2017
MicroNova AG

Coordination of technical sales and key account management

- Development of a cross-divisional sales department for the company's testing products and services
- Development and implementation of the sales strategy
- New customer acquisition
- Key-Account-Management
- Technical Advice for test requirements
- Creation of technical concepts, calculation and preparation of offers
- Responsible for communication between customer and technical department
- Support of technical project implementation with regard to requirements conformity and customer satisfaction

Division strategy/Business Plan

- Development of a cross-divisional strategy/business plan for the next 5-10 years
- Successful implementation of the first steps
- Development of a product strategy for in-house XiL products
- Part of an innovation team for the prototype development of new products
- Implementation of innovation techniques (e.g. Hackathon)

03.2009 – 10.2013
MicroNova AG

Project Management & Software development

- Professional responsibility within the framework of projects for teams of up to 4 members
- Creation and responsibility for software architecture of the simulation platform NovaCarts
- Preparation of applications for funding under the Central Innovation Programme (ZIM)
- Creation and publication of professional articles and documentation/manuals
- Development of Hardware-in-the-Loop simulation platform “NovaCarts“
 - Goal: replacement for the OS/9-based, in-house simulation platform through a modern PC technology
 - Technologies used:
 - FPGA, VHDL, LabVIEW FPGA
 - Realtime Linux, preemptive kernel patch
 - ANSI C/C++
 - Subversion, git
 - Ethernet, TCP/UDP
 - UML, doxygen, Enterprise Architect
 - Eclipse CDT
 - Linux Shell Scripting
 - Subprojects:
 - Analysis and selection of different realtime operating systems (OS)

- Analysis of various real-time IO fieldbuses for IO backbone (e.g. Ethernet and EtherCAT)
- Development of an FPGA-based engine simulation card
- Development of a synchronization and data exchange protocol based on UDP/IP and Ethernet
- Development of a POSIX-based operating system abstraction Layer
- Development of an IO hardware driver for PCIe cards in Linux
- Development of a model flow and simulation platform on Linux-RT
- Conception, implementation and maintenance of a git-based version control system
- Conception, implementation and implementation of a development, test and rollout model for the initial development and maintenance of NovaCarts
- Commissioning, acceptance and rollout of NovaCarts on existing production systems with the pilot customer
- Development of a network protocol adapter
 - Goal: Development of a low latency gateway between the two proprietary real-time data exchange Protocols RDB and ADTF
 - Technologies used:
 - ANSI C/C++
 - Ethernet, TCP/IP and UDP/IP
 - Linux, preemptive kernel patch

Diploma Thesis

- Development of generic FPGA drivers for hardware-in-the-loop simulation platform "NovaSim"
- Goal: development of a universally applicable configurable driver platform for the real-time integration of FPGA-based IO cards into NovaSim test systems
- Technologies used:
 - Matlab Simulink
 - FPGA
 - LabVIEW, LabVIEW RT Module and LabVIEW FPGA Module
 - ANSI C/C++
 - XML
- The generic driver has been used in every new NovaSim test system since 2010

Working student activities

- Development of a bus monitoring tool for CAN and LIN
 - Client-server architecture
 - Client implementation in Visual Basic .net and NI LabVIEW

	<ul style="list-style-type: none"> ○ NI Pharlap server implementation with LabVIEW and components in ANSI C ○ TCP/UDP NetCode in C++ • Efficiency comparison of two VHDL compiler toolchains (Xilinx WebISE and National Instruments LabVIEW FPGA)
<p>08.2007 – 02.2009</p>	<p>Working student activities</p> <p>08.2007 – 02.2009 Messring Systembau MSG GmbH 02.2007 – 02.2008 Dokumentations- und InformationenZentrum München GmbH 07.2005 – 02.2007 Mayr Umweltanalytik GmbH Dachau</p> <p>Projects/Tasks</p> <ul style="list-style-type: none"> • Module development in Microsoft Navision (Messring) <ul style="list-style-type: none"> ○ C/AL, C/SIDE, SIFT • Development of an automatic device-flasher for in-house M=Bus (Messring) <ul style="list-style-type: none"> ○ ANSI C, PIC Microcontroller • Development of Div. Tools for (semi-) automated monitoring of internal processes and processes (DIZ) <ul style="list-style-type: none"> ○ Microsoft Excel, Visual Basic for Applications VBA • Development of evaluation algorithms and automated processing tools for various chemical analyses <ul style="list-style-type: none"> ○ Microsoft Excel, Microsoft Access, Visual Basic for Applications VBA
<p>09.2001 – 06.2005 Dresdner Bank München</p>	<p>Customer Service Specialist</p> <ul style="list-style-type: none"> • Development of various automation tools for processes and processes (e.g. mass transfers) on the basis of the in-house tools <ul style="list-style-type: none"> ○ Reward of 1.000€ within the framework of an internal innovation program <p>Training as a bank clerk</p> <ul style="list-style-type: none"> • Development of various tools for automating internal processes (e.g. report book generator)

Education and Training

Further trainings/Certifications	<ul style="list-style-type: none">• iSAQB Foundation Level Software Architect• MVR-Training Kreatives Verkaufen Stufe 1
2006 - 2010	<p>University of Applied Sciences München</p> <p>studied electrical engineering and information technology with specialization in technical informatics.</p> <p>Conclusion: Graduate Engineer (Dipl.-Ing. FH) of electrical and Information technology (final note: 1.9)</p> <p>Main areas of study:</p> <ul style="list-style-type: none">• Computer-architecture• Field-bus-systems• Computer networks• Operation systems• Real time systems• Software engineering• UNIX• Network Security
2004 - 2006	<p>University of Applied Sciences München</p> <p>Degree: higher education entrance qualification (Graduation note: 1.5)</p>
1994 - 2001	<p>Ignaz-Taschner-Gymnasium Dachau</p> <p>Abschluss: secondary school level I certificate (final mark: 3,3)</p>