David Venditti - Software Engineering Consultant
Curriculum Vitae

Revised: 23.05.2024

Personal data

Address	David Venditti Georg-Kerschensteiner-Str. 33a 81829 München
Fon	++49-(0)89-95899789
Fax	++49-(0)89-95899772
Mob	++49-(0)173-6612712
E-Mail	consulting@venditti.de
Web	http://consulting.venditti.de
Birth	03.12.1971 in Waldshut
Status	single
Tax	148/168/81235, FA München IV/V

Stations

02/2012 – today	Freelance Software Engineering Consultant
01/2012 – 01/2012	Software Engineering Consultant, Mettler-Toledo AG, Greifensee
07/2001 – 12/2011	Software Engineering Consultant, Zühlke Engineering AG, Schlieren
10/1997 - 06/2001	Development Engineer Control Systems, SIG / FIAT / ALSTOM, Neuhausen am Rheinfall
03/1993 - 09/1997	Study, Diplom-Ingenieur Maschinenbau & CA-Technologien, Fachhochschule Konstanz
10/1991 - 09/1992	Military service, Technische Schule des Heeres in Eschweiler
08/1982 - 07/1991	Abitur, Klettgau-Gymnasium in Tiengen

Characteristic

multi interested · ambitious · empathic · eloquent · leader qualities

Interests

Music (Piano, Guitar, Bass, Drums, Vocals) -> https://musik.venditti.de
Photography and art -> https://kunst.venditti.de
Sports (Tabletennis, Mountainbike)
Travelling

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References

Concept, consulting, architecture and development

Object tracking in sports

Freelance | 2021 - 2024 | 3 years

(...work in progress...)

Mobile, Server, PC and Embedded Sensor fusion and signal processing

...from deeply-embedded-system to the cloud... ...from real-time-systems to app- and web-technologies... ...from optimized Bluetooth-communication to the web-shop... ...from state-space- and probabilistic Kalman-filter-models to 3D-visualization...

Tasks: Concept, consulting and development

Tools: nordic nRF52833, Bosch BNO08X, Infineon DPS310, Bluetooth Low Energy, Zepyhr, McuBoot, C, C++, Python 3.9, PyTorch, FastApi, pydantic, ionic 6, Vue 3, Capacitor, Java, Linux, Windows, PySide6, Docker, FireBase, Raspberry Pi, Android, iPhone / iOS, Salea Logic Analyzer, Segger J-Link, Oszilloscope, Multimeter

Development lead

Remote HiL testing

Freelance | 2021 / 2022 | 6 months

Requirement analysis is carried out, a wide spectrum of test systems and systems to be tested should be brought under one roof.

Subsequently, a concept for a hardware test system, that can be used globally, is carried out.

Afterwards, full-stack development of a prototype, from hardware to the cloud, takes place

Automated network installation of operating systems using PXE

CI-/CD-integration

Tasks: Concept, consulting and development

Tools: C++, Python, FastApi, Linux, Windows, Docker, TypeScript, Vue, Quasar, various laboratory equipment, debug-probes, PXE

Concept and development

Business intelligence via web scraping and data mining

Freelance | 2021 | 1 month

(confidential)

Tasks: Concept, consulting and development

Tools: Python, Selenium, xPath, BeautifulSoup, requests, Pandas, NumPy, SciPy

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Concept and development

Software Protection for a scripting language

Freelance | 2021 | 2 months

(confidential)

Tasks: Concept, consulting and development

Tools: (confidential)

Concept and development

Service Software

Freelance | 2021 | 1 month

(confidential)

Tasks: Concept, consulting and development

Tools: (confidential)

Concept and development

Control software for transmission electron microscopy

Freelance | 2020 / 2021 | 4 months

A worldwide leader of transmission electron microscopes wants to provide their customers with superior value with highly customized solutions.

Design and implementation of algorithms for optimized control of the actuators of transmission electron microscopes.

Development of the essential parts of a virtual microscope. Threedimensional visualization of the mechanics of the specimen holder. Design of an appealing and easy to use graphical user interface.

Consulting in software design, testing and simulation.

Tasks: Consulting and development

Tools: Python 3.5, PySide2, Qt3D, OpenCv, Numpy, HTTP, JSON

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Analysis, coaching, consulting, development

Platform development for high-volume chip tests

Freelance | 2020 | 5 months

A worldwide leader of microchips wants to improve their test infrastructure.

High-quality testmachines working in a massively parallelized way are used to reliably test huge amounts of electronical chips in the industrial domain. Software needed to control these machines can be reused in parts. Accordingy, a software platform is being developed.

Requirements are determined in collaboration with the domain experts The software code is then implemented in a reusable way.

Consulting in all relevant areas of Software Engineering. Establishment of proven-in-use methods of requirements engineering and testing. Execution of code reviews. Consulting in design- and architecture-areas. Improvement of the development process. Improvement of the code quality.

Tasks: Analysis, coaching, consulting, development, test

Tools: Red Hat Linux, pthreads, C++, GIT, Bitbucket, Jira, Confluence

Concept and development

Neural Style Transfer for foto und video

Freelance | 2019 | 3 months

Development of an editing software for foto- and video-media. It features extraction and application of artistic style. Artificial intelligence with multiple convolutional neural networks is leveraged.

Mixing- and blend-effects also for multiple styles based on masking of objects and there motion and color. Furthermore, masking with an neural net of type Mask-R-CNN.

Training of the networks happens on GPUs for improved speed. Evaluation may be done either on CPU or on GPU.

Tasks: Development

Tools: Python 3.7, PyTorch, OpenCV, numpy, PySide2, Cuda, nVidia GPU

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Development and consulting

Test automation for a semiconductor manufacturer

Freelance | 2019 | 3 months

A well known semiconductor manufacturer wants to execute costly test sequences in an automated fashion. Doing so these test sequences become feasible in the first place with respect to effort and reproducability.

Various measuring devices (oscilloscopes, digital multi meters, power supplies and waveform generators) are connected to a central PC via USB and Ethernet and are controlled using VISA / SCPI.

On the software side abstractions are created not only for control of the measuring equipment but also for simple declarative description of input and output of tests as well es their execution flow.

Design of new tests is now possible with minimal effort. Partially interactive and in a comfortable way the tester can now run hundreds of test variants.

Tasks: Development and consulting

Tools: Python 3.6, VISA, SCPI, numpy, scipy, matplotlib, Jinja

Concept and Development

Modernization of a machine control

Freelance | 2018 | 3 months

The user interface and the communication channels of a machine control software are renewed applying modern technologies.

Communication takes place using a microframework based on a webserver. The UI is built as a single-page-webapplication. MVVM and REST are applied as design patterns.

The OS is extended in a way so that it acts as a automatic hotspot providing a wireless network. Accordingly, any WIFI-enabled control device can be connected and used.

Tasks: Concept and development

Tools: Node.js, Vue.js, Axios, Bootstrap, Python, Flask, Werkzeug, Linux network

Concept and Development

Optical tracking system

Freelance | 2018 | 1 month

A prototype for an optical tracking system is developed and implemented. Commercially available high-quality lenses from a well known manufacturer of digital Single-Lens-Reflex cameras are adapted and integrated into the system mechanics- and electronics-wise.

User interaction takes place via touch screen or via the built-in web server. Stepper motors are used for the movement of the 2-axes-system.

Tasks: Concept, System- and SW-Architecture, creation of a prototype

Tools: Raspberry Pi, Arduino Nano, Design Spark Mechanical, 3D-printing

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Technical Coaching

Autonomous Driving

Freelance | 2018 | 3 months

A world group in the automotive area develops an innovative system for autonomous driving. Elements of robotics, machine learning and multi-sensor-fusion are therefore merged to series production readiness.

Prototypical artefacts stemming from research, most of them developed in Python, are transformed into native parts for the target platform. Service oriented architecture and RESTful communication in the context of Adaptive Autosar serve as the basic framework.

Processing of data in the peta-byte-range as well as fusion of data originating from various sources are key characteristics.

Several scrum teams working on high-level features in a self-organized way are coached in all relevant technical aspects.

Tasks: Scrum/LeSS, (A-)TDD, Clean Code, Clean Architecture, Design Patterns

Tools: C++14, Python, ROS, CMake, Clion, Fitnesse, Google Test, Google Mock, Adaptive AutoSar, Misra, Boost, Git, Ansible, Docker, Linux

Consulting, architecture and development

Development of a hybrid system

Freelance | 2017 | 2 months

An existing C++ code base is wrapped in Python and extended with new features. Doing so it is ready for use in the surrounding Python ecosystem.

Development of a proprietary native persistence layer. Integration in a webservices environment.

Tasks: Consulting, development, coaching

Tools: Python 3.6, Django + REST framework, requests, C++14, Cereal, PyBind11

Porting

Porting a client-server-application

Freelance | 2017 | 4 months

A complex client-server-application is being modernized. Sufficient test coverage is ensured to maintain quality.

Semi-automatic translation of the client parts with 2to3 and with 4to5 is applied. On the server side the Linux operating system is updated as well as the stack consisting of Apache, Python and Django.

Tasks: Porting

Tools: Microsoft Visual Studio 2008 / 2015, C++ 99 / 14, Python 2.7 / 3.6, PySide 1 / 2

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Concept and Development

Object-detection and -tracking

Freelance | 2017 | 4 months

Dynamically moving objects are detected and tracked using video-recording and suitable image processing algorithms The determined trajectories are displayed in three dimensions

Single Board Computer, CPU: Broadcom BCM2835, Windows PC

Tasks: Concept and implementation

Tools: Raspberry Pi, Camera, OpenCV, C++, Python, OpenGL, PySide

Technical consulting

Consulting in test automation

Freelance | 2017 | 3 days

The client is looking for supportive measures in the end-to-end test area for automatic testing of modern web based single page applications.

The state of development is assessed. Possibilities and limits of abstraction are elaborated. A simple prototype is designed.

Procedure recommendation is given along with an estimation of required effort.

Tasks: Determination of state, technologigal evaluation, development of concept, procedure recommendation, estimation of effort

Tools: Python, Selenium, PyTractor, Eclipse, AngularJS, GIT

Concept and Development

Robotic project in the sports area

Freelance | 2016 | 8 months

A training device for the sports area is conceived. Futhermore, a prototype thereof is created. Mechanical and electrical parts are layed out in a minimalistic, durable and robust way. Special attention is directed to contemporary user- and software-interfaces. The characteristic feature to be pointed out is the dynamic and flexible configurability. Operation takes place either via Bluetooth and Android or using a web-interface.

3 BLDC-motors are supplied by PWM-controlled drivers. 2 servo motors also receive PWM-signals and are used for positioning. 1 stepper motor is supplied by a driver controlled via I2C and is used as a conveyor.

Tasks: Concept, System- and SW-Architecture, creation of a prototype

Tools: ARM STM32F4, ATMEGA328P, Design Spark Mechanical

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Consulting, Model technology

Traceability for System- and SW-architecture (Automotive)

Freelance | 2015 | 1 month

To improve quality of an ASPICE-process in the automotive environment measures as well as tools are examined. Traceability and relations among artefacts of an exemplary product development project shall be elaborated especially.

To do so a system architecture using SysML is created and improved. Building on top of that a SW architecture in UML is developed. Traceability is established to both - test- and requirements-artefacts.

Tasks: Analysis, consulting, system- and SW-architecture, tooling

Tools: IBM Rhapsody with SysML and UML, PTC IMS (CM+SI) and Reqtify / Doors, respectively

Concept and implementation

Portal solution for licensing and administration of a SW vendor

Freelance | 2014-2015 | 1 year

A software vendor distributes his products via a web portal. Handling of any client-related activitities like registration, ordering, licensing, software-download and maintenance is supported.

A Client-/Server-Solution is chosen built on top of a cloud-based module-store.

Tasks: Concept and development within an agile development team.

Tools: Python, HTML, Jinja, Javascript, Django + REST, Linux

Innovation, Model technology

Modelling Environment

Freelance | 2012-2014 | 2 years

Concept and development of a Meta-Modelling-Environment. Focus is put on graphics, scriptability and extensibility. Model-to-model- as well as model-to-text-transformation are supported. Models can be executed and observed directly within the development environment.

The main part is a validating multi-pass-model-compiler. The core components are - based on OMG CMOF - developped in C++. This provides good performance also for big models.

Flexible and dynamic usage is achieved with scripting technology. This also enables access to a huge area of existing libraries and helper modules and adaption to manifold external tools using COM-technology, for example. Convenient code generation is offered through a suitable template language.

Support for merge- and import-operations fosters reuse of existing models. Fine grained licensing allows for free formation with respect to the product palette.

Tasks: Concept, project lead, development lead and implementation with an agile team.

Tools: Python, C++, Jinja, BOOST, QT + PySide, Windows, OMG CMOF

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Concept, implementation

Backoffice connection for a web shop

Freelance | 2013 | 2 months

A web shop operator would like to automatically link the portal data with his backoffice tooling.

To do so a REST-adapter for the portal is developed. That communicates - on the backoffice side - using MS COM and other technologies with the tools.

Tasks: Concept and implementation

Tools: Python, Django + REST framework, MS COM

Concept and implementation

Automatic report generation

Freelance | 2012 | 2 months

A financial service provider offers report generation for his online presence. Source for those reports is data from transaction records within databases.

Configurable templates allow for flexible and tailor made report generation. Manifold output formats like PDF, HTML, CSV and XML are supported.

Tasks: Concept and implementation

Tools: Python, ReportLab, Django

Technical project lead

Technical project lead for a big development team

SWE consultant | 2011 | 1 year

A global player for drying balances develops the newest generation of control- and operation-software. A development team with 20 members accepts the challenge to develop innovative functionality with modern development methods and with an agile development process.

Tasks: Technical project lead for the development team and definition of training requirements. The team develops core components of the software systems, takes measures to ensure quality and implements these. Collaboration within the team is optimised.

Tools: ARM 9, IBM Rhapsody, C++, BOOST, QT, USB, SqLite.

Consulting, Education

Evaluation of a realtime operating system

SWE consultant | 2010 | 3 weeks

Modern micropumps are controlled by software that is built on top of a realtime operating system. The client needs support to choose such a realtime operating system as well as an introduction to development of an appropriate software architecture.

Tasks: Definition of requirements, introduction to RT-OSs and suitable SW-architecture. Evaluation of suitable RT-OSs and characterisation thereof. Presentation and recommendation to the client.

Tools:

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Consulting

Tool application in a regulated domain

SWE consultant | 2010 | 1 week

In the railway sector - as well as in other domains - the need for modern development methods and -tools increases. The challenge in that context is to keep compliance with the domain specific standards at the same time.

Tasks: Assessment of tool application and of the devlopment process taking into account railway standards. Presentation and recommendation how to proceed.

Tools: IBM Rhapsody

Strategic consulting

Consulting for strategy with respect to SW-architecture

SWE consultant | 2010 | 3 weeks

Electrical rectifier-devices for mobile communication networks are going to be used increasingly in the extra-european market. Accordingly, the need for agility in the software development process increases drastically. A workshop together with the client aids in revealing and evaluating action potentials for that.

Tasks: Analysis of the existing SW architecture. Definition of technical shortcomings and action potentials. Collection of suitable technologies for the strategic improvement of the software systems. Conduct and facilitation of an evaluation workshop.

Tools:

Usability Engineering

Contextual Inquiry for coating devices

SWE consultant | 2010 | 6 weeks

Modern coating devices for metallic workpieces pose manifold requirements with respect to the usability of the operation software. At the same time cost pressure increases. Therefore, Es sollen daher Verbesserungs- und auch Einspar-Potentiale aufgedeckt werden.

Tasks: Analysis of manuals and sight of production devices on site help to define the main requirements for suitable software systems. Several contextual inquiries reveal requirements typical for each user. A Use Case Model is created to define the functional requirements. During a presentation David Venditti demonstrates action potentials to the relevant stakeholders and recommends how to proceed.

Tools: Contextual Inquiry

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Expertise

Creation of a Schedulability-Expertise

SWE consultant | 2010 | 3 weeks

For Frequecy Converters software is required that cope with the stringent requirements regarding temporal determinism. The manufacturer of such systems determins conspicuously high CPU processing load on his systems. That's considered a high security risk.

Therefore David Venditti analyses the software architecture and applies a mathematical calculation model (RMA) for assessment of schedulability. The stakeholder receive an assessment document for the system status and a recommendation how to proceed.

Tasks: Analysis of the software crchitecture. Application of Rate Monotonic Analysis. Empowerment of the client to conduct such analysis on his own behalf in the future. Presentation of results and recommendation how to proceed.

Tools: Rate Monotonic Analysis

Team setup, architecture, project lead

Redesign of Facility Automation Software

SW architect | 2008 | 2 years

David Venditti takes over an innovative apporach for Facility Automation and leads a software team in developing a sustainable and scalable solution. Special care is taken to create an open architecture allowing for simple and flexible integration of manifold devices and field buses.

In addition to the core product a tailor-made test- and simulation-infrastructure is developed. Using that quality of the software can continuously be achieved and improved. This also supports configuration and commissioning of products before shipping them to clients.

Tasks: Analysis of the existing concepts and the prototype-level implementation. Afterwards definition and implementation of the architecture, setup and project lead for a 4-person development team.

Tools: Embedded Linux, Eclipse, Java, JamVM, openArchitectureWare.

Consulting, development

Automatic testing for elevator systems

SW architect | 2007 | 6 months

The client is a global player in the elevator business striving for software quality improvement. The effort for manual testing shall be reduced and - in parallel - the release cycles shall be shortened significantly. After analysis of the former approach with respect to development and test suggestions for unit- component- and system-tests are elaborated and discussed.

Test driven development shall be fostered in the future. An initial setup for automatic testing of elevator software components is developed and commissioned.

Tasks: Analysis of development- and test-approach. Working out of suggestions for improvement. Consulting of the test- and quality-lead-manager.

Tools: Microsoft Windows, Infragistics Komponenten, Interface-Hardware by National Instruments, CAN Interface-Hardware by Vector. IDE: Microsoft Visual Studio. Language: C#.

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Education, architecture

Introduction of Modelling Technology for medical products

SW architect | 2006 | 1 year

The client is a leading manufacturer of hearing instruments developing innovative accessories for his products. The development approach taken so far does not yield the quality level intended and required. Transparency is an issue with the software - changes and bug-fixing are very costly.

Step by step the existing software is transfered to a UML modeling tool and subsequently generated by that tool. Design and behaviour of the software becomes visible in that way. The development team is enabled to apply changes faster and to fix bugs more easily.

Tasks: Introduction of Telelogic Rhapsody, education in UML, testable adaption of the generated software via USB and a C#-Client from the PC side.

Tools: ARM9, Nucleus, Microsoft Windows, UML with Rhapsody. IDE: Microsoft Visual Studio, Mentor Graphics Edge. Languages: C, C++, C#.

Team lead, architecture, project lead

Architecture and project lead for a manufacturer of hearing instruments

SW architect | 2005 | 1 year

The client is a leading manufacturer of hearing instruments. An exisint device shall be replaced by a new one development. This shall be done with new tooling and processes for the software development team.

The tasks involve support of project lead, planing of development activities in tight collaboration with the client's developers. An extensive and tailor made test infrastructure is designed, implemented and successfully and flexibly applied by the developers. The specialists prepare a configuration management structure and provide an automatic build system.

Tasks: Architecture, support of project lead, testing and configuration management.

Tools: ARM9, Sciopta RTOS, Microsoft Windows, UML with Rhapsody. IDE: Microsoft Visual Studio, WinIDEA. Languages: C, C++, Python. Utilities: CppUnit, Boost, GccXml, BuildBot, PEG.

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Development

Integration in a VoIP project

SW Engineer | 2004 | 1 year

A notable provider for telephony services adapts a complex VoIP-based client-/server-system tailored to his needs. Along with third-party suppliers hard- and software-based phones are developed and tuned according to country specific requirements. A soft client communicates to the application server using SOAP.

The project team develops a Macromedia Flash plug-in for that and systematically tests it with unit-tests. The web service components are integrated using Python to communicate with the servers in a scripted and flexible way. This action potential is also usable for maintenance- and monitoring-tasks on the Linux OS. The development environment for the translation and for the graphical adpation of a receptionist application as well as a Microsoft Outlook plug-in are grossly automated.

Tasks: Unit-Testing, performance optimisation, automation and scripting

Tools: Microsoft Windows, Red Hat Linux. IDE: Microsoft Visual Studio. Languages: C++, Python. Utilities: CppUnit, Boost, gSoap.

Development, education

Linux based toolchain and team enabling in the plant manufacturing domain

SW Engineer | 2003 | 6 Monate

The software development for an intrusion detection system requires a state-of-the-art development environment. The project tasks involve development of a complete and consistent tool chain from the HW to the UML tool as well as the evaluation of suitable hardware, commissioning of a Linux based operating system and adaption of the execution framework of the UML tool for Embedded Linux.

Furthermore, plug-ins for Eclipse and Rational Rose Realtime are developed to allow for comfortable and consistent debugging with the integrated tool chain. The team works in a contemporary way using UML as well as with synchronised model- and code-level remote debugging. It creates extensive documentation in a systematic way.

Automatic installation and distribution of manifold parts of the tool chain is conducted. Framework components are developed in a requirements-neutral way and tested using modelled unit tests. Finally education and extensive know-how transfer takes place for the topics Linux, Kernel Mode and RTAI.

Tasks: Coaching, development of the entire tool chain.

Tools: Rational Rose RealTime with Connexis middleware, eLinOs with RTAI, Eclipse, Microsoft Visual Studio. Languages: C, C++, Perl, Java, Basic, bash.

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Architecture, education, development

Simulation framework for distributed realtime systems

SW Engineer | 2003 | 9 months

A global player in the public transportation sector needs flexible and efficient test- and simulation-tooling for his growing control system product palette. A generic simulation software is developed which can be configured and therefore allows for optimal reuse.

In the beginning requirements are captured with UML Use Cases and a rough iteration plan is wrapped up. Subsequently the development environment is set up along with the development guidelines and the architecture definition. The client receives support with data modelling and GUI-sketching

Extensive communication components for CAN and MVB are developed in a first real-world scenario. In parallel to the development extensive coaching in object oriented methods, UML, C++ and XML takes place.

Tasks: Architecture, coaching, development

Tools: Rational Rose, MS Visual Studio and XML spy. Frameworks and libraries: MFC, Xerces. Hardware: CAN and MVB. Languages: C++, Python, XML, XSLT.

Architecture, development

Framework development and redesign of development processes for sewing machine software

SW Engineer | 2002 | 1 year

Analysis and subsequent redesign of company wide processes with respect to data and functionality for a well known sewing machine manufacturer. Implementation of universal and future proof concepts for design, administration, distribution and processing of sewing designs. Modelling and successful introduction of a portabl realtime sewing kernel and of a portable editing component.

Support for WYSIWYG under realtime constraints and for distributed application. Creation of a portable and extensible data format and accompanying conversion and editing tools. Conservation of value by conversion and reuse of existing sewing designs. Concept of an intranet-/internet-solution for company wide administration of sewing designs.

Tasks: Architecture, coaching, development

Tools: Rhapsody, ThreadX, MS Visual Studio and XML spy. Frameworks and libraries: MFC, Twisted, Nevow, MySQL, Sablotron; Languages: C++, Python, XML, XSLT.

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Development

Software for sewing machines

SW Engineer | 2001 | 1 year

Requirements for service- and setup-related functionality of the top model of a sewing machine manufacturer are captured. Subsequenty modelling of the results as well as implementation and test of the functionality takes place.

Furthermore during a process analysis phase requirements for production tests are determined and captured in a Use Case model. The required functionality is implemented and introduced, machine wide control logic is modelled, implemnted and tested. Data management is unified and central administration with an XML repository and code generation are set up.

Tasks: Coaching, development

Tools: Windows CE, MS Visual Studio. Languages: C++ and Python.

Development

Tilting technology for trains

SW Engineer | 1999 | 2 years

Analysis, design and implementation of the tilting technology for the modern fleet of a european provider in the public transportation sector. Capturing and conditioning of sensor data for route detection as well as transformation to control signals.

Timely distribution of those on train level and according control of elecro-mechanical actuators. Integration of tilting technology in the communication infrastructure and adaption to the vehicle's diagnosis system.

Flexible surveillance mechanisms and redundant layout of HW- and SW-parts ensure compliance with tough safety guidelines. Speciallsed tooling for acquisition and evaluation of runtime diagnosis data is provided. Application of proprietary realtime operating systems and networking within the train wide control system using industrial field buses like CAN and MVB.

Tasks: Development

Tools: Assembler and C.

David Venditti
Georg-Kerschensteiner-Str. 33a
81829 München
148/168/81235, FA München IV/V

Web: http://consulting.venditti.de
E-Mail: mailto:consulting@venditti.de
Tel.: ++49-(0)89–95899789
Fax: ++49-(0)89–95899772

Revised: 23.05.2024

Concept, development

Development of a train simulator

SW Engineer | 1997 | 2 years

A versatile realtime simulation tool for development and test of tilting technology related devices and their components is created. The user is provided with convenient, complete and direct interaction with the complex system under test. Direct integration of application source code of tilting processors within the simulation allows for optimal representation of the modelled system.

A tailor made code generator automatically produces the source code which is required for simulation of the communication among all relevant components.

Fields of application include development of software as well as inhouse tests and commissioning up to acceptance sessions with the client. The train simulator yields high test coverage on system- and on component-level at an early project stage. It is grossly built modularly, project specific adaptions are feaible without problems.

Tasks: Development, Simulation

Tools: Target platforms Windows 9x and Windows NT. Tools: Visual C++, Python and PCCTS.

Development

Firmware of a PCI extension card

SW Engineer | 1997 | 3 months

Spezification and implementation of firmware, driver software and an API for a PCI extension card that is used to communicate with CAN networks.

The firmware extends the communication protocol with a project specific application layer which allows for deterministic communication in realtime.

Tasks: Development

Tools: Target platforms Windows 9x and Windows NT. Language: C.

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Additional qualifications

09/2018	Education Node.js, Vue.js, Flask
11/2017	Training project technology: pyBind11
08/2017	Training project technology: Cereal C++
05/2017	Training project Cloud: Amazon WebServices
03/2016	Training project Internet Of Things (IOT): Raspberry Pi / Atmel / Stm32 / Arduino / System Workbench
10/2015	Education SysML
04/2014	Education Django
09/2013	Education Javascript, Twitter Bootstrap, AngularJS
05/2012	Education QT / PySide
08/2011	Evaluation of existing Metamodel-Environments
03/2011	Training Project Management
12/2010	Embedded Software Engineering Kongress in Sindelfingen
09/2010	Training camp: Projekt-Management, Rhapsody-Alternatives
08/2010	MDA and DSLs with openArchitectureWare & xText
04/2010	Certificate IBM Certified Solution Designer - Rhapsody in C++
01/2010	OOP 2010 in München
11/2009	Evaluation of Meta GME
09/2008	Training camp: DSLs with UML and Topcased
05/2008	Training openArchitectureWare
12/2007	Certificate Projekt Management
11/2007	Certificate Software Estimation
09/2007	Training camp: Scrum, C#, .net, Team Foundation Server
09/2006	Training camp: Usability Engineering, Telelogic TAU
09/2005	Training camp: Code Analysis, Automatic Testing
01/2005	Embedded World in Nürnberg
01/2005	Rational Rose RT and iLogix Rhapsody
09/2004	Training camp: UML 2 & Embedded Architectures
04/2004	Certificate C# and the Microsoft .NET Framework
02/2004	Certificate Quality Management
09/2003	Training camp: MDA, XMI, MDSD-Tools
06/2002	Certificate Rational Unified Process (RUP)
05/2002	Certificate Testing Object Oriented Systems

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03/2002	Certificate Sun Certified Java Programmer
10/2001	Certificate Objektoriented Analysis and Design with UML
09/2001	Training camp: UML RT with Rational Rose RealTime

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