CURRICULUM VITAE
CHRISTOPH GRIMM

CHRISTOPH GRIMM
DIPLOM INGENIEUR (FH)

SCHULSTR. 30
D-69151 NECKARGEMÜND
☎ +49 176 / 80074605
E-MAIL: GRIMM@G-ES.DE
WEB: WWW.G-ES.DE

- Software Development C#, C++

- Automation

- Embedded Programming

Christoph Grimm has studied electrical engineering with study focus on process automation at university of applied science. Since 28 years he has worked in the development of software- and hardware solutions for special machinery and automation. Professional expertise is the development of PC based technical applications, embedded software development and control and visualization of complex processes.

His long development activity founded his philosophy, that the nature of things is simple and that it is important to find this simplicity in order to create effective solutions. Also that the quality of a product is strongly dependent on personal commitment.

To find out what a customer really needs to use his capital goods in an efficiently and effectively way, a thorough analysis of the problems and demands, and planning and implementation of a robust, but nevertheless economical solution, is part of his systematic approach.

Nationality: German

Languages:
German – native
English – good

Year of birth: 1965

Availability:
From January 2026
(State 02/01/2025)

Working locations:
Neckargemünd +50 km (local presence),
+250 km (80% remote office)

Contract type:
freelance

Education:
Study of electrical engineering, study focus process automation, university of applied science Ravensburg-Weingarten, graduation in 1990 with overall grade good.

Service:
- Software development in C#
- Embedded software development
- Analysis and development of automation solutions using IPC techniques
- HMI Interfaces

Hourly Rate: 69 €, all inclusive

DIPL.-ING. (FH) CHRISTOPH GRIMM • SCHULSTR. 30 • D-69151 NECKARGEMÜND

EXPERTISE

Programming Languages

- C# — very good
- C/C++ — very good
- Java — practical knowledge
- Assembler — good
- Pascal — practical knowledge
- SPS (IEC 61131) ST — good

Development Environments

- Microsoft Visual Studio 2005-2022 — very good
- Microsoft Visual C++ 6.0 — very good
- Borland C++ Builder — very good
- Keil C development environment — good
- CoDeSys V2.3+V3 — good

Platforms, Technologies

- .NET 1.1 - 4.7, .NET core 3.0 — very good
- WPF, WCF, WF4, ADO.NET — very good
- ASP.NET, MVC — gut
- MFC, STL — very good
- Win32 API — very good
- Windows 10, Windows 7 Windows 2008 Server, Windows CE — good
- XML, JSON, HTML — good
- Database MySQL, SQL Server — good
- ORM EntitySpaces, EntityFramework — good
- Object oriented design (OOD) — very good
- Design Pattern (incl. MVVM) — very good
- SOA (service oriented architecture) — good
- MS-PRISM, Unity — very good
- Agile — basic knowledge
- NUnit, Ranorex UI Test — good
- CleanCode — very good

Protokolle/Kommunikation

- TCP/IP — good
- CAN, Profibus — basic knowledge
- MSMQ — good
- Memobus (similar Modbus) — good
- Further proprietary serial protocols — good

Hardware Development

- Control hardware based on 80C188EB and 8/16 Bit Microchip controller
- Signal processing and conversion (analogue and digital)
- PCI bus, AT bus interface
- ECAD design with Protel/Altium
- PCB layout
- PLD design
- EMC testing
- Creation of production documents and manuals
- Testing devices and testing programs
- Production support

Standard Programs

- Word, Excel, Powerpoint, MS Project — good
- SubVersion, TFS, VSS — good
- Rational ClearQuest — good

Further Expertise

- Industrial-PC technology — good
- Drive technology — good
- Measuring technology — good
- Control technology — good
- HMI interfaces — good
- Siemens S5, S7 PLC — basic knowledge
- SAP — basic knowledge

Soft-Skills

- Methodical approach
- Sense of responsibility
- Analytical skills
- Interdisciplinary cooperation
- Goal orientation
- Driving license class B

WORK EXPERIENCE

01/2018 – today   Engineering Tool

Sector/Customer

Automation / Fa. SICK / Fa. Renegade GmbH Waldkirch

Task

Maintenance and further development of engineering tools for the configuration of SICK safety devices

Technologies

- .NET 3.5, .NET 4.7, .NET 6
- Ranorex UI-Test
- TeamCity Build Server, Nant, InnoSetup, Jama, GITLAB, Linux

Development Environment

- Microsoft Visual Studio 2022, Windows 10

08/2017 – 12/2017   Backend-Development C#

Sector/Customer

IT / Fa.Axoom Karlsruhe

Task

Backend Entwicklung for Web Shop und IoT

Technologies

- WebApi, REST service
- .NET 4.6, .NET Core 2.0
- MVC, SignalR, WebSockets

06/2017 – 06/2017   Demo application based on Microsoft Azure IoT Hub and Windows 10 IoT Core

Task

Processing of weather data using IoT (Internet of Things)

Realization

- .net UWP application
- backend service on Raspberry Pi Board with Windows 10 IoT Core for generation of weather data
- connection to Microsoft Azure IoT Hub

Technologies

- .NET UWP, .NET Core
- Raspberry Pi
- Azure IoT Hub

04/2015 – 04/2017   **Engineering Tool in C#**

Sector/Customer

Automation / [Fa. ABB](), Heidelberg

Task

Development and maintenance of an Engineering software based on Codesys

Technologies

.NET 4.0, WPF, MVVM, Codesys Automation Platform

Development Environment

Microsoft Visual Studio 2013, Windows 7

02/2015 – 02/2015   **Website ASP.NET**

Task

Rework of a Website with ASP.NET

Technologies

ASP.NET, MVC5, Javascript, JQuery, HTML, Bootstrap, IIS

09/2014 – 01/2015   **Software development in C#**

Sector/Customer

Automotive / [Fa. Continental Temic](), Nürnberg

Task

Tool to define a custom protocol specification between a production machine and a MES-server

Realization

- Definition of data model
- Editor for selection of commands and parameters
- Logging of exchanged information using reference data
- Automatic generation of protocol specification in word format

Technologies

.NET 4.0, WPF, MVVM, Microsoft PRISM, Unity, XML, unit testing

Development environment

Microsoft Visual Studio 2010, Windows 7

10/2009 – 09/2013   Software development in C#

Sector/Customer

Automation / *Harting Electric*, Espelkamp

Task

- Development of a framework for RFID applications

Realization

- Workflow-Engine with WF4.5, configurable hub
- DB-interface (DAL) for WF, configuration, logging and production data
- service oriented architecture (SOA), uniform service interface to ERP (SAP), MES, middleware and mobile devices (RFID-Handheld)
- Powerful configuration- and monitoring tools (Workflow Editor, Service Catalogue Explorer, SOAP Console, Message Analyzer, Logging Tool, Asset/Item-Explorer)
- Development of extensive business workflows for supply chain management
- Electronic Kanban board with WPF, Visualization of all relevant production parameters

Technologies

.NET4.5, WPF, WCF, WF4.5, MySQL, SQL Server, UML, SOA, SOAP, XML

Development environment

Microsoft Visual Studio 2012, Windows 7, Windows Server 2008

08/2009 – 09/2009	Development FTP Client AS400 / C#

Sector/Customer

IT / *FIRMENNET Thiel*

Task

Time controlled monitoring of several directories and transport of found files via FTP to AS 400 server

Realization

- Extension and bug fixing of partially implemented software
- Configuration of the target directories and FTP connections, user interface with WPF
- FTP + SFTP protocol
- logging functions, additional control commands for AS400

Development environment

Microsoft Visual Studio 2008

07/2009 - 07/2009	Web site with Silverlight/C#

Task

Development of Web page with Silverlight

Development environment

Microsoft Visual Studio 2008

10/2006 – 03/2009	Software development in C#

Sector/Customer

Automation / Lenze AG Hameln

Lenze Engineering Software

Task

Software development for a engineering tool for drive controls

Realization

- Integration of field devices (drive converters) into an engineering software by using an existing framework
- Custom dialogs and powerful editors for configuration of field devices (application and wiring)
- Communication with field devices via OPC server
- Extension of customer configuration by inserting predefined catalogue elements, motors, communication modules and other components

Technologies

.NET 2.0, .NET Forms, OPC, drive control

Development environment

Microsoft Visual Studio 2005, Windows XP

05/2006 – 09/2006   **Software development in C#**

Sector/Customer

Automation / ifm-electronic Tettnang

Produkte ifm-electronic

Task

Software development for testing and production systems

Realization

- Input program for inspection parameters
- Generation of automatic test runner
- Persisting data in XML format
- Automation of a laser welding system for cylindric sleeves, development of control program and user interface
- Commissioning of production system
- Creation of reports using XSLT

Development environment

Microsoft Visual Studio .NET

09/2008, 04/2006, 03/2005 – 06/2005   Automation of polymer mixing plant

Sector/Employer/Customer

Industry / Firma IBR Dorsten / Fa. Kobato Niederlande,

Produkte Kobato

Task

Automation of a mixing plant for liquid polymers

Realization

- System modelling, selection of required hardware
- Development of a driver in order to control 4 frequency converter via Memobus protocol (similar Modbus)
- Driver to control a Wago bus coupler (TCP/IP interface, 30 digital outputs, 40 digital inputs, 30 analogue inputs, 20 counter inputs)
- Algorithms to precisely loop control the mass flow and mixing ratio
- Visualization, logging, parameter masks
- Multi threading application using Microsoft MFC
- Recipe management, script execution, additional parameter import via Excel
- Development of electrical circuit diagram
- Programming of time and security-critical routines using IEC 61131 (ST) on PLC of bus coupler
- Control program in C++ using Industrial PC with Windows XPe

Development environment

- Microsoft Visual C++ 6.0
- CoDeSys

10/2005 – 02/2006   System development of industrial measurement process, in C#

Sector/Employer/Customer

Heavy industry / Firma IBR Dorsten / Fa. Heraeus, Hagen

Task

Redesign of an existing process to determine the quality of liquid steel. Visualization of measured values and measurement progress via a web interface.

Realization

- Development of the concept, definition of interfaces between process, database and visualization
- Reimplementation of the measurement algorithm in C#
- Implementation of the measurement hardware interface via TCP/IP
- Logging functions
- Simulation functions
- Coordination of hardware and software development team
- Support for customer

Development environment

Microsoft Visual Studio .NET

07/2005 – 09/2005   Firmware development CAN Terminal

Sector/Employer/Customer

Electronics / IBR Dorsten

Task

Extension of a terminal in order to program customer specific parameter masks by using a projecting software

Realization

- Extension of terminal firmware (hardware based on Infineon C167 Controller)
- Implementation of functions for parameter input, text output and CAN communication
- Concept for making the communication compliant to CANopen
- Implementation of a PC based projecting tool in C++

Development environment

- Microsoft Visual C++ 6.0
- Keil C Entwicklungsumgebung

01/2005 – 02/2005   Hardware development

Sector/Employer/Customer

Electronics / Firma IBR Dorsten

Hardwareentwicklung

- Gigabit-LAN Modul
- ETX base board
- Creation and programming of a testing device for a custom specific electronic module

Development environment

Protel Schematics SE99 (Altium)

06/2001 – 12/2002   Automation of a train loading station

Sector/Employer/Customer

Automation / Firma iSAM AG, Mülheim ad Ruhr, Firma Hansaport, Hamburg

http://www.isam-ag.de/waggonbeladestation

Task

Automation of train loading station for the bulk materials ore and coal by taking into account the wagon geometry and loading weight

Realization

- Recognizing the wagons using four laser scanner, detecting the special wagon characteristics in order to determine the exact wagon position
- Modelling and plausibility check of wagon order
- Development of a loading algorithm to optimize the weight and volume distribution in the wagon dependent on the specific bulk material parameters
- Controlling of shunting robot and bulk material discharge device via a H1 coupling of an existing Siemens S5-PLC
- Implementing a mass flow controller in C using a real time device card
- Visualization of the overall process
- Controlling program in C++ on Industrial PC under Windows NT embedded

Programming language

C / C++

Development environment

Borland C++ Builder

04/1997 – 05/2001   **Graphical user interface for IPC, projecting software with MFC/C++**

Sector/Employer/Customer

Automation / Firma Schmidt Feintechnik GmbH, St. Georgen i. Schw.

http://www.schmidttechnology.de/de/maschinen/produkte/5steuerung/s1_bedienober.htm

Task

Development of control system for NC press based on IPC technique under Windows NT

Realization

- Visualization of characteristic press force curves
- Graphical user interface with MFC
- Dataset management
- Connection to SPC system
- Projecting tools for CNC drives and CAN nodes

10/1995 – 03/1997   **PLC programming tools in C/C++**

Sector/Employer/Customer

Automation / Firma Schmidt Feintechnik GmbH, St. Georgen i. Schw.

http://www.schmidttechnology.de/de/maschinen/produkte/5steuerung/index.htm

Task

Engineering tools for diverse control systems

Realization

- Powerful PLC development environment with PLC editor (proprietary instruction list) and debugger
- Serial interface driver (V24)
- PC based PLC compiler for Microchip 16C84 controller
- Development of PLC program for press control with proprietary instruction list
- Development in C/C++

04/1991 – 09/1995   Hardware and firmware development machine controls

Sector/Employer/Customer

Automation / Firma Schmidt Feintechnik GmbH, St. Georgen i. Schw.

http://www.schmidttechnology.de/de/maschinen/produkte/5steuerung/index.htm

Task

Development of PLC programmable machine controls for pneumatic and electro-mechanically presses

Realization

- Development of control hardware based on 80C186, 80C188EB und 8 u. 16 Bit Microchip controller
- Signal conditioning
- Measurement amplifier

Firmware development

- Evaluation of press force curves (force vs. stroke) in assembler (processor 80C186)
- Implementation of firmware for press control with four Microchip controller
- Security-critical triggering of press stroke by mutually monitored controllers
- Testing program for production in Forth

Programming languages

Assembler, Forth

Tools for hardware development

- ECAD design with Protel
- PCB layout with Protel and Eagle
- PLD programming tools
- Microchip Emulator

03/1990 – 12/1990   Image processing system

Sector/Employer/Customer

Capital goods / Transferzentrum Ravensburg-Weingarten

Task

Development of a microcontroller based image processing system for pattern recognition for lace fabrics

Realization

- Hardware development, controller NEC V25
- Control and computation of data from a CCD line scan camera
- Firmware in C
- PC diagnosis software in C