

FREELANCE SOFTWARE ENGINEER

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| Since 01/2021
IBSOFTSYS
Freiburg i. Br., Germany | Foundation and development of my engineering office Software Systems - IBSOFTSYS . |
| 08/2013 - 12/2020
Homeoffice
Santa Clara, California | In-house development: computer vision app for smartphones <ul style="list-style-type: none">• Self-study, among other things, in computer vision, algorithms and human-machine communication• Design and implementation (C/C++) of computer vision algorithms<ul style="list-style-type: none">- Recognition of colors, geometrical shapes and playing cards in video images- Understanding the rules of a card game• Design and implementation (<i>Objective-C</i>) of an intuitive human-machine interface• Optimization of the software to process video images in real time• Publication of the smartphone app AI Card Player on the Internet |
| 07/2008 - 07/2013
Sunnyvale, California | Parental leave
Self-study in digital image processing with software applications |
| 11/2007 - 06/2008
General Motors
Advanced Technology
Palo Alto, California | Modeling: search for optimal system architectures <ul style="list-style-type: none">• Design and implementation (<i>MLDesigner</i>) of models for the simulation of complex, distributed systems in the vehicle• Design and implementation (C++) of search algorithms |
| 06/2007 - 10/2007
Sunnyvale, California | Parental leave |
| 08/2005 - 05/2007
Cisco Systems
San Jose, California | Support of software developers in the support team <ul style="list-style-type: none">• Writing guidelines for testing software modules• Creation of <i>Perl</i> scripts for test automation |
| 06/2004 - 07/2005
Crosstest
San Mateo, California | "Startup" experience: software development for unit test tools <ul style="list-style-type: none">• Design and implementation (<i>Java</i>) of software modules for generating test cases for C programs• Analysis and optimization of existing software modules |
| 11/2003 - 04/2004
Daimler Chrysler
Research & Technology
Palo Alto, California | Support of the research team in prototype development <ul style="list-style-type: none">• Analysis of a faulty navigation system (<i>Windows</i>)• Correction and extension (C++) of the system |

01/2003 - 09/2003 Completion of my dissertation *Validation of Safety-Critical Distributed Real-Time Systems*
 Homeoffice
 Sunnyvale, California

RESEARCH AND DEVELOPMENT ENGINEER

10/1998 - 12/2002 Development methodology
 BMW Group
 Technology Office
 Palo Alto, California

- Participation in the team for software and hardware design methods
- Dissertation as a contribution to model-based software development

02/1990 - 09/1998 Development of electronic systems in interdisciplinary teams
 BMW Group
 FIZ
 München

- Design and implementation (C) of embedded real-time systems in the drive train and vehicle body area
- Cooperation with related departments and external service providers

RELEVANT SKILLS

- Hardware-oriented programming in C
- Object-oriented programming in C++, Objective-C und Java
- Embedded software development (real-time systems)
- Design and implementation of algorithms (e.g. for image processing)
- Model creation with Scilab (open source alternative to MATLAB)
- Computer vision implementation
- Mobile app development (iOS)
- Excellent analytical thinking
- Enjoy solving complex tasks
- Strong interest in learning new things
- German (mother tongue), English (business fluent, spoken and written)

ACADEMIC EDUCATION

03/2000 - 09/2003 Technical University of Munich (TUM) and BMW Group
 Dissertation in industry *Validation of Safety-Critical Distributed Real-Time Systems*
 (Dr.-Ing.)

10/1983 - 06/1989 University of Karlsruhe (TH)
 Degree in electrical engineering *Digitale Sprachverarbeitung*
 (Dipl.-Ing.)