

# Resumé - Markus Löffler



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## Summary

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- 35 years of experience in Software Design and Software Development with focus on apps, embedded software, graphical user interfaces
- International experience through 6 years of study in the USA (diploma thesis, Ph.D, and participation in a startup company)
- 18 years of experience in the Automotive Industry
- 8 years of experience in Mobile Software Development
- Only interested in *freelancer projects*, ideally 15h-25h/week

## Professional Experience/Projects

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### Mods and Tech Demos for an Automotive Headunit

- Modifying the HMI in order to display special content for tech demos
- Implementation of advanced 3D graphics and animations running on the headunit

Adesso AG  
Freelancer  
02/2021 - now

### BMW Motorrad Connected Ride

- Implementation of Cloud-based sync and other Cloud services
- Development on iOS and Android

Pixida GmbH  
Freelancer  
12/2020 - 05/2022

### Prototype for the Integration of Alexa into an Automotive Headunit

- Utilization of the Alexa Auto SDK on a Linux-based headunit

Adesso AG  
Freelancer  
05/2020 - 02/2021

### BMW Interaction Ease Demo for CES 2020 in Las Vegas

- Demonstration of future user interface concepts (e.g., gesture recognition and eye tracking)
- Development of an Android app for the user interface and playback of animation and multimedia content
- Modification of the graphic stack of Android to compensate for the windshield distortion of the head-up display

Adesso AG  
Freelancer  
11/2019 - 04/2020

### Alexa Voice Control in BMW Vehicles

- Integration of the Alexa voice control for BMW ID5/ID6 headunits
- Development on iOS/RxSwift for the "BMW Connected" app

Jambit AG  
Freelancer  
05/2018 - 06/2019

### Framework for BMW Music Remote Apps

- Development of an iOS Frameworks in Objective-C for the integration of 3rd party music apps into the BMW entertainment system
- Collaboration with companies like Spotify, Amazon Music, etc.

Pixida GmbH / Adesso AG  
Freelancer  
01/2015 - 01/2020

### Indie Developer for Mobile Apps

- Design and development of the iOS-Apps „Kodi Music Remote“ (<http://kodimusicremote.com>) and "Swipe Calendar"

Indie Developer  
03/2013 - today

### HMI Development for BMW Headunits

- Embedded development in C++ in the area of HMI/entertainment for BMW ID4/ID5 headunits
- Development of trace analysis tools on Python

Elektrobit / TechConnect GmbH  
Freelancer  
11/2010 - 05/2014

### HMI Development for an Instrument Cluster

- Embedded MMI software development for a Daimler AG instrument cluster

Bosch AG via SSW GmbH  
Freelancer  
06/2009 - 10/2010

### Project Management for a Data Logger

- Development coordination and project management of the data logger „blue PiraT“ (CAN, MOST, LIN, RS232, Ethernet, Video, Flexray)
- Collaboration with BMW, Daimler, Audi, Porsche and Harman-Becker

Telemotive AG  
Permanent Position  
01/2005 - 05/2009

### Project Management in the Area of Headunits and Vehicle Networks

- Project management in the area of the BMW CCC Headunit
- Spezifikation of the vehicle network communication (CAN, MOST)

Telemotive AG  
Permanent Position  
03/2002 - 05/2006

### Development of a Frameworks for Robot Control

- Design and development of the Robotic Platform, an object-oriented framework for robot control, with a graphical user interface and 3D simulation on QNX

Clemson University  
Research Assistant  
01/1997 - 08/2001

### Technische Organisation von Diashows

- Technical organization of 23 slide show presentations about trips to Africa and Asia
- Development of the EasySlide system for multimedia control in slide shows

Liveshow  
1991 - 1997

## Education

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### Ph.D., Electrical Engineering

- Clemson University, Clemson, SC, USA, GPA 3,9
- Thesis title: “New Object-Oriented and PC-Based Approaches to Robot Control Software”.

Clemson University  
01/1997 - 08/2001

### Diploma, Electrical Engineering

- Technische Universität München, Average Grade 1,6
- Thesis title: “Measurement of the Yarn Path and Tension in Yarn Unwinding” (External thesis at Clemson University, USA).

Technische Universität München  
11/1990 - 10/1996

## Skills

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- Software development: Object-oriented design, embedded software, real-time systems, graphical user interfaces, 3D graphics
- Programming languages: Swift, Objective-C, C++, C, Python, Kotlin, Java, HTML
- Operating systems: iOS, Linux, Android, MacOS, QNX, Windows
- Network/interfaces: MQTT, CAN, MOST, LIN, RS232, TCP/IP
- Tools: XCode, Visual Studio Code, GIT, Android Studio, Jira, SourceTree, Virtual Box, Eclipse, Visual-C++, Subversion, Mercurial, Bugzilla, Joomla, Doxygen, Excel, Word, Final Cut Pro X, Inkscape, Affinity Designer, CANoe
- Languages: German (native), English (excellent), Spanish (basic)