

Volker Floeder

Senior Software Consultant

Project Manager + Team Lead + Architect

Developer + Analyst

Specializing in Cross-Platform & -Architecture, high performance, high availability secure and reliable systems.

Broad experience in commercial software architecture and development; experienced in all stages of the software development lifecycle.

Experienced team and project lead, excellent working with customers; agile and eXtreme Programming practitioner and mentor.

Quality advocate, self-motivated, excellent verbal and written communication skills.

Mainly working on system improvement and optimization regarding embedded systems, especially concerning stability, performance and maintainability.

Personal Details

Name Volker Floeder

Address Haydnstraße 22
D-27570 Bremerhaven, Germany

Education Details 1980 – 1986 University of Hamburg, Germany

Mathematics: Combinatorics, Design Theory, Graph Theory, Numerical Methods

Computer Science: Software Design, Operating System Design, Programming Languages, Compiler Design, Optimal Algorithms

Areas of Specialization Digital Maps / Navigation, ADAS, Autonomous Driving, Software Design especially Cross-Platform & -Architecture including Validation & Verification, Object Oriented Design, Multi-Threading, Distributed Systems

Selected Skills

Project Management Team Building & Mentoring, Project Scheduling, Client Relations & Presentations, Risk-Management, Assessments, Greenfield Projects

Coaching Introduction of Cross-Plattform Tools (CMake, GNU, LLVM), Libraries (wxWidgets, GigaBASE) and Methodologies for Binary and Sourcecode compatibility (Dynamically Loadable Modules with Standardized Interfaces vs. Conditional Compilation and Generic Programming)

Software Architecture regarding Cross-Platform Development, i.e. Layered Design, Functional Programming, Message-based Communication, Client-Server Architecture for Distributed Systems.

Hardware in the Loop / Software-Simulation to test and analyze early.

Software-Metrics, Code-Reviews. Audits and Assessments.

Architecting Analysis: Rapid elicitation of System Requirements through Use-Case Analysis and Non-Functional

System Design: Data Modelling, System Design Specification, Interface Control Specification, Performance Analysis, Algorithm-Complexity, Pattern-Driven Design, Domain-Driven Design, Intention-Revealing Interfaces

Software Engineering Languages: C++11/17 (with MISRA C++), C, Assembly Languages, Python, Shell-Script, UML, XML, JSON

Systems: Linux, Windows, QNX, VxWorks, RTOS-Kernel

Libraries: C++ Standard Lib (STL), Boost 1.6x (asio), wxWidgets 3.x, TinyXml 2.x, GigaBASE 3.9, MySQL 5.x, QT 4.x, wpa_supplicant 2.x, Procol Buffers 2.x, nanomsg

Tools: Visual Studio, gcc, clang, MinGW, VTune, Parallel Studio, Purify / Quantify / Coverage, Insure++, Valgrind, Dr. Memory, Clang-Sanitizer, Subversion, Git, CMake, Jenkins, Jira, Confluence, BugZilla, Trac, TestRail, Polarion, Enterprise Architect, CLion, Coati, Wireshark, Understand 3.x, Typora

Protocols TCP/IP, UDP, HDLC, RLP, CAN, ADASIS, NMEA 0183

Methods Agile Software Development, Scrum, Extreme Programming / Pair Programming, Test Driven Development, V-Model, Generic Programming

Languages German: Native
English: Full professional proficiency

Hobbies and Interests I am a Hovercraft enthusiast and licensed pilot for a **Small Sized Commercial Hovercraft** carrying up to 12 people in near-shore coastal waters.

Professional Experience

Since 1999	Floeder IS GmbH Founder and CEO
Field	Autonomous Driving, Advanced Driver Assistance Systems, Digital Maps, Car Navigation, Embedded Linux, Mobile Communication, Software Technology
Customers	Audi, Blaupunkt, BMW, DKS-Köln, Daimler, Ford, HarmanBecker, Höft&Wessel AG, Ibeo AS, Intermap, MAN, Nokia(Navteq), Opel, Porsche, Siemens, TomTom(Tele Atlas), Valeo, Vorwerk, ZF
Projects	
Since 2018	<u>Software Architect Autonomous Driving</u> Fully autonomous driving solution for public transportation systems. Combines different sensor technologies to support a digital environment enabling autonomous driving in public traffic. <i>Role: Lead Software Architect, Software Specification and Review, Mentoring</i>
2017 - 2018	<u>Automotive Telematics Control Unit</u> Incorporating geolocation (GPS, Glonass) and mobile telecommunications (2G/3G/4G) technologies. Providing connected in-vehicle services, regarding safety and security such as eCall, Era-Glonass and Stolen Vehicle Recovery. <i>Role: Senior Consultant - Embedded Linux Developer and Architect. Embedded Software, 3G/4G Communication, Software Specification, Implementation and Verification. Consulting and Mentoring.</i>
2015 - 2017	<u>Kitchen Appliance</u> Twelve Functions Kitchen Appliance that can mix and cook all at the same time. <i>Role: Senior Consultant - Embedded Linux Developer and Architect: System improvement especially regarding Wifi-Connectivity and other Low-Level functionality.</i>
2014 - 2015	<u>Video Monitoring for Public Transportation Systems</u> Video streaming and recording system for train systems. <i>Role: Senior Consultant - Embedded Linux: Improvement regarding stability.</i>
2013 - 2014	<u>Mobile Communication Device</u> Mobile communication device for shunting to replace analog radio by GSM-R. <i>Role: Senior Consultant – Principal Software Architect</i>
2006 - 2012	<u>RAPS, ADAS, digital maps</u> Electronic-Horizon provider to be used in map-based driver assistance systems. Runs on several operating systems and implements unique features like Context-Based Road-Matching, Turn-Prediction and dynamic length of the predicted path. Used by Daimler, Ford, MAN and ZF. RAPS obtained a funding of € 700,000 in 2009 by Innovationsstiftung Hamburg. <i>Role: Principal Software Architect – Project-Manager</i> <u>GDF-Import</u> Fast map compiler. Two hour compilation time on a single workstation, where others need two weeks on a server farm. <i>Role: Principal Software Architect and Developer – Project-Manager</i>