

# andreasoffenhaeuser

cloud solution architect

## contact

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## languages

native german  
professional english  
beginner japanese,  
french

## craftsmanship

♥ nodeJS, JavaScript  
Python, Matlab  
bash, C, VBA  
software design  
system understanding  
agile methods  
continuous deployment

## domains

IoT solutions  
automotive tech  
robotics  
deep learning  
blockchain

## experience

2016–

### Solution Architect

Robert Bosch GmbH, Stuttgart DE

Responsible for backend architecture of connected vehicle services. This includes designing microservices according to domain driven principles as well as implementing features in our SCRUM team.

acquired skills microservice architecture, nodeJS, OSS compliance, agile software development

2014–2016

### Backend developer connected vehicle

Robert Bosch GmbH, Stuttgart DE

Starting 2014 I was responsible for designing and developing a prototype system for a connected vehicle. It was a fullstack job where I was responsible to manage a team of up to five to set up servers, develop backend & frontend as well as the vehicle communication. In 2015 the project left prototype state and a larger team was built up to develop the system with a more mature state. I was involved in selecting the team members and defining the development processes.

acquired skills nodeJS, AngularJS, Docker, project management

2012–2014

### Function developer for driver monitoring

Robert Bosch GmbH, Stuttgart DE

Following my experiences as a test manager I switched sides and started developing algorithms for driver monitoring. This involved handling of larger data sets within Matlab and building a simulation environment capable of handling multiple thousands kilometers of test data to evaluate algorithm performance. With changing algorithms it was also necessary to develop new scoring functions. Development of series code was done according to automotive SPICE requirements. In 2013 I was also leading a 8 month project study with a german automotive OEM to identify the potential of new driver monitoring functions.

acquired skills statistics, data handling, requirements engineering, change management, Matlab, project management, ASPICE

2010–2012

### Test manager for driver monitoring software

Robert Bosch GmbH, Stuttgart DE

Responsible for planning automotive software tests from unit to system level. On system level I was also responsible for designing and implementing the test environment for hardware in the loop simulation of a automotive ECU. This had to be integrated into existing quality frameworks and comply with functional safety according to ISO26262.

acquired skills systems engineering, project management, vehicle communication (CAN/FlexRay), test methodology, CANoe, VBA

2009

### Internship - motorcycle hydraulic simulation

Bosch Corporation, Yokohama JP

As part of my studies I accomplished a six months internship in Japan. My task was to create a simulation environment for motorcycle ABS systems. I had to collect requirements from different engineers, research motorcycle hydraulics and then develop a simulation with a user interface. The development was done in Matlab & Matlab Simulink.

acquired skills Matlab, systems engineering, fluid physics, GUI design

## education

- 2016 **Deep Learning** Foundation Nanodegree Udacity  
Intrigued and fascinated by the advances of artificial intelligence I wanted to get a deeper understanding of the topic and joined the class of Udacity's newly introduced Deep Learning program. Within the course there are several projects ranging from image recognition to generative networks.
- 2007–2010 **Bachelor of Engineering, 1.3** Hochschule Heilbronn, DE  
With a grant from Bosch I studied different fields of mechatronics and microsystems engineering. In 2009 I spent 6 months in Japan to develop a simulation environment for motorcycle brake systems during my internship. Apart from my bachelor thesis there was one bigger project (4 months) that had to be completed which centered around a 2-DOF robot system made up of three joint SCARA robots. The project combined programming in Matlab/Simulink with physics and geometry for robot control. For my thesis I analyzed the influence of advanced driver assistance systems on steering based driver monitoring systems. It was a very data analytics heavy job and again combined Matlab with scientific knowledge.
- 2005–2007 **Vocational training** Robert Bosch GmbH, DE  
During my vocational training I learned the basics of engineering and how they relate to the physical world. The broad scope of topics covered in mechatronics also quickly made me realize my love for programming over the other possible fields in engineering. During the training two major projects had to be completed. The first one was the design and manufacturing of an adjustable power supply, the second was the construction of a 3 DOF assembly robot.

## interests

- learning new technologies (blockchain, artificial intelligence, robotics, deep learning)
- share & exchange knowledge on meetups/confs
- skiing, biking, diving
- cooking