

Dr.-Ing. Thomas Hartmann

Curriculum Vitae

+49 176 62011315
mail@dr-thomashartmann.de
www.dr-thomashartmann.de

linkedin.com/in/drthomashartmann
xing.to/dr-thomashartmann
twitter.com/drtomhartmann



Personal Details

Birth Name Bosch
Born August 7th, 1981 in Aalen
Citizenship German

Career Objective and Top Skills

IT Architect, Consultant, and Developer for ...

- 1. Big Data, Streaming, Internet of Things, Industry 4.0**
 - develop company-wide Big Data streaming services, architectures, and analytics platforms for IoT and i4.0 projects at Bosch
- 2. Semantic Web, Linked Data, Reasoning, Data Validation**
 - focus of PhD thesis and ongoing research activities within 2 international working groups
- 3. Ontology Engineering/Design, Knowledge Representation, Data Modeling, (Meta-)Data Standards**
 - developed 3 OWL ontologies and further developed a metadata standard in a model-driven way within 2 international working groups
- 4. Web/Software/Requirements Engineering, Web/XML Technologies, Database Design**
 - technically responsible for 4 larger IT projects (at least 5 project members)
 - worked in 7 larger and 16 smaller IT projects

Professional Experience

- Since 08/2016 **Big Data Architect, Consultant, and Developer, Robert Bosch GmbH, Stuttgart.**
Key Contributions:
- develop a company-wide service providing low latency, fault tolerant, and highly scalable data streaming platforms
 - develop a company-wide service to integrate data of various data sources (e.g., SAP systems, databases) with Big Data architectures in batch and streaming mode
 - develop a company-wide service for high throughput, fault tolerant, and highly scalable processing of data streams
 - develop Big Data streaming and stream processing architectures as well as analytics platforms for IoT and i4.0 projects at Bosch
- 09/2015 **External PhD Student in Computer Science, Karlsruhe Institute of Technology (KIT),**
– 07/2016 Research Group: Web Science and Knowledge Management.
- *reference:* Prof. Dr. York Sure-Vetter, Karlsruhe Institute of Technology
 - *reference:* Prof. Dr. Kai Eckert, Stuttgart Media University
- 04/2010 **Research Associate, GESIS - Leibniz Institute for the Social Sciences, Mannheim.**
– 03/2016 *4 IT projects (technically responsible and jointly responsible for the project management)*

- actively participated at *4 international working groups*
 - attended and presented at *19 international conferences*
 - attended and presented at *18 international workshops* and *5 Dagstuhl workshops*
 - *PhD thesis* is based on *30 scientific articles* (i.a., 6 journal articles)
 - *key achievements* in IT projects: conceptualized and implemented (1) multitier software architectures for 3 web applications using the MVC software architecture pattern, (2) data models, (3) persistence strategies, and (4) import/export functions
 - *reference*: Prof. Dr. Christof Wolf, president of GESIS - Leibniz Institute for the Social Sciences
- 03/2007 **IT Consultant**, *cellent AG*, Stuttgart.
- 09/2007 *4 IT projects | key achievements*:
- contributed to the conception of a SOA for the Stuttgart city administration
 - evaluated BPEL engines and recommended a BPEL engine for the usage within the context of a software development project in collaboration with the Stuttgart city administration
- 02/2005 **Application Developer**, *Carl Zeiss AG, Oberkochen*, Soft-Hardware-Projekt, Bopfingen.
- 10/2008 6 times (2-3 months each) during semester breaks | *key achievements*:
- developed an application to enter metadata on images of optical devices, directly when creating them
 - developed an application to log measured values of a measuring instrument in a user-controlled way
- 09/2001 **Apprenticeship as IT Application Specialist**, *Intec Consulting AG*, Hüttlingen.
- 07/2004 *>3 IT projects | key achievements*:
- conceptualized and implemented multilingualism for a help desk system
 - programmed diverse Microsoft Office applications

Education

- 04/2010 **Dr.-Ing. (KIT), summa cum laude.**
- 07/2016 Karlsruhe Institute of Technology (KIT)
 PhD Thesis: *Validation Framework for RDF-based Constraint Languages*
 1. Advisor: Prof. Dr. York Sure-Vetter, Karlsruhe Institute of Technology
 2. Advisor: Prof. Dr. Kai Eckert, Stuttgart Media University
- 10/2007 **M.Sc. (TUM) in Information Systems, 1.6.**
- 11/2009 Technische Universität München
 Master's Thesis: *Creativity Support in Communities for Innovations*
 Advisor: Prof. Dr. Helmut Krcmar
- 09/2008 **Semester Abroad.**
- 02/2009 Erasmus Program at the Athens University of Economics and Business, Athens, Greece
- 10/2004 **B.Sc. (TUM) in Information Systems, 2.2.**
- 09/2007 Technische Universität München
 Bachelor's Thesis: *Evaluation of BPEL-Engines*
 In cooperation with cellent AG, Stuttgart
 Advisor: Prof. Dr. Helmut Krcmar
- 09/2001 **Apprenticeship as IT Application Specialist, 1.7.**
- 07/2004 Intec Consulting AG, Hüttlingen
 Thesis: *Development of XML Schemas for Exchanging XML Seminar Data*
- 09/1992 **German High School Degree (Abitur).**
- 07/2001 Kopernikus-Gymnasium, Aalen-Wasseralfingen

Awards

- 07/2017 **Summa Cum Laude Honor Awarded for PhD Thesis.**
 Karlsruhe Institute of Technology (KIT)
- 02/2016 **Best Paper Award.**
 10th International Conference on Semantic Computing (ICSC 2016)
- 05/2015 **Performance Bonus for Special Achievements in 2014.**
 GESIS - Leibniz Institute for the Social Sciences

- 07/2012 **Best PhD Student Project.**
9th Summer School on Ontology Engineering and the Semantic Web
- 07/2004 **Prize for Special Contributions.**
Technische Schule Aalen, apprenticeship as IT application specialist

Computer Science and Project Management Skills

Project M.	Maven, Agile Project Management, Scrum
Streaming	Kafka, Kafka Streams, Spark Streaming, Flafka, Flume, StreamSets, Apama, Universal Messaging
Hadoop	HDFS, Sqoop, Spark, MapReduce, Hive, HBase, Oozie, ZooKeeper
Security	Hadoop Security, Authentication (Kerberos, TLS), TLS Encryption, Authorization (Sentry, ACL)
Semantic Web	RDF, RDFS, SPARQL, OWL 2, SWRL, SHACL, SPIN, ShEx, ReSh, DSP
Programming	Java, JavaScript, SQL, C, C++, C#, VB, VBScript, VBA, VB.NET, OCaml, MI
Databases	Relational, NoSQL, Graph, XML, Document Databases
XML	XML, XPath, XQuery, XSLT 2, XSL-FO, XMI, DTD, XSD, RELAX NG, Schematron, Examplotron
Web	MVC, Spring, HTML5, CSS, Bootstrap, JavaScript, Ajax, Java Servlets, JSP, ASP, ASP.NET, Hibernate, FreeMarker, ReSpec, Apache Tiles, PHP 7
SOA	Web Services, RESTful Web Services, WSDL, SOAP, UDDI, BPEL
Data Modeling	UML 2.5, MDE, MDA, MOF, EMF, Ecore, QVT, QVTo
SAP	SAP BW, SAP ERP, SAP R/3 (SAP PS, SAP JCo)
Statistics	R, SPSS, SAS, Stata
VCS	Git, GitHub, SVN, CVS
CMS	Drupal, TYPO3

Language Skills

German	Native Language
English	Business Fluent
French	Basic (advanced course at secondary school for 7 years)
Greek	Very Basic (half-year language course during semester abroad)

Social Engagement

- Since 2008 Voluntary ambulance man at the German Red Cross
- 2001 - 2008 Alternative service at the German Red Cross (ambulance courses San A and San B)

Stuttgart, March 19, 2017

