DR. TOBIAS KELLER

mail@tobiaskeller.net

CURRICULUM VITAE

Personal Details

Birthday	September 21, 1983
Nationality	German

Professional Experience

Since 05/2016 | **Data Scientist, DB Systel GmbH / Zero.One.Data, Frankfurt**

- Data science and development of artificial intelligence systems in a big data environment, including consulting and requirements engineering, data engineering, bringing machine learning into production, data visualization, project and stakeholder management
- Projects, for example : deep reinforcement learning for train dispatching, causal analysis for improvements in the bottleneck around Frankfurt, predicting energy consumption, anomaly detection, predictive maintenance using sensor data, image classification, text mining / natural language processing of social media data
- Expert team "House of A.I." at Deutsche Bahn AG
- Head of the Analytics Chapter
- Designing, implementing and teaching a "Master Class" for data science and artificial intelligence; lecturer for the dual study program of DB Systel GmbH; lecturer in the artificial intelligence training program at DB Systel GmbH

Since 07/2014 | **Lecturer for Data Science and Artificial Intelligence**

- Lecturer for two complete courses in the Master program of the WHU – Otto Beisheim School of Management, Vallendar:
  - "Visual Data Analysis", since November 2019
  - "Managing Data Science", since March 2020
  - "Data Preparation for Analytics", since January 2022
- Doctoral education – PhD Courses for the WHU – Otto Beisheim School of Management, Vallendar, and for the University of Gießen, Graduate Centre of Social Sciences, Business, Economics and Law (GGS)

11/2015 – 04/2016 | **Senior Consultant / Forensic Data Scientist, Ernst & Young, Fraud Investigation and Dispute Services, Eschborn**

- Management and execution of data analytics during audits
- Risk analyses / visualization: business partners and cash flows

09/2001 – 10/2015 | **Freelance IT Consultant**

- Programming windows software and VBA macros, web design
- Administrating small company networks, selling computer hardware and software

10/2009 – 07/2015	**Research and Teaching Assistant / PhD candidate, University of Gießen, Chair for International Accounting**

- Research in international accounting, finance, and strategic management; independently and in cooperation with international researchers
- Management of data collection and analysis projects with international teams
- Data management and database design (i.a. MySQL, Stata)
- Visiting researcher at the University of North Carolina, Chapel Hill
- Designing and teaching courses in international accounting

Education and Internships

10/2009 – 03/2016	**PhD studies (Dr. rer. pol., grade: summa cum laude), University of Gießen**

- "Essays on Pension Accounting and Business Research": five empirical papers on the following subjects: Accounting, Statistics, Machine Learning, Strategic Management
- Published papers in Accounting and Business Research (ABR), European Journal of Operational Research (EJOR), Zeitschrift für betriebswirtschaftliche Forschung (ZfbF), and a „Revise & Resubmit" for the Strategic Management Journal (SMJ)

10/2003 – 09/2009	**Studies in Business and Economics (Dipl.-Kfm., grade: 1.3), University of Gießen**

- Majors: information technology, international accounting, taxation

11/2006 – 08/2009	**Student Assistant, University of Gießen, Chair for International Accounting**
08/2008 – 09/2008	**Internship, Ernst & Young, Tax Advisory, Eschborn**
01/2008 – 06/2008	**Studies in Business Sciences, ESC Montpellier, France**
08/2007 – 12/2007	**Studies in Business Sciences, University of Wisconsin-Milwaukee, USA**
02/2007 – 04/2007	**Internship, PricewaterhouseCoopers, Advisory, Frankfurt**
08/2006 – 10/2006	**Internship, Nassauische Sparkasse, Controlling and Marketing, Wiesbaden**
08/1994 – 07/2003	**A Levels (mark 1.6), Gymnasium Philippinum Weilburg**

Skills

Statistics / Machine Learning	Actual project experience using, i.a., the following methods: Bayesian statistics, bootstrapping, causal modeling, clustering algorithms, deep learning / neural networks, ensemble models, , gradient boosted trees (including CatBoost, XGBoost), (orginal and multinomial) logistic regression, monte carlo simulation, multilevel modeling, (deep) reinforcement learning, structural equation modeling, survival models, support vector machines
Programming / Statistics Software	Amos, C#, Delphi, Knime, MPlus, Python, R, SQL, SPSS, Stata, web development (HTML, Javascript, PHP), VBA
Visualisation tools	Jupyter Notebooks, QlikSense, QlikView, R Markdown, R Shiny, Spotfire, Tableau
Data Engineering	u.a. Hadoop, Hive, Kafka, MS SQL Server, MySQL, PostgreSQL, Spark, Teradata
Financial databases	Amadeus, Compustat, Dafne, Datastream, IBES, Osiris, Thomson Reuters EIKON
Accounting	IFRS, HGB, US GAAP, German tax accounting
Languages	German (mother tongue), Englisch (fluent), French (good)

Gießen, May 3, 2022

Tobias Keller