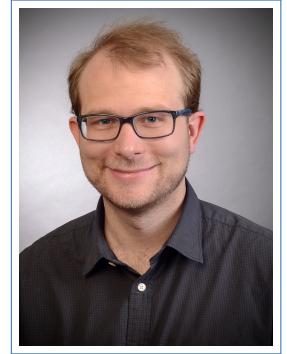


# Curriculum vitae

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🐦 [@informomics](#)



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## Studies

- 2018-2024 **Bachelor of Science Business Information Systems (7 Semester), THM Friedberg**  
Electives:
- Foundations of Data Science
  - Predictive Analytics with Python
  - Introduction to Decision and Game theory
  - Introduction to Programming Language Julia
  - Term paper: Artificial Intelligence in the electricity sector
  - 5 Months Full-Time practical training Phase at Fraunhofer IEE in Kassel
- 2008-2018 **Study, Justus-Liebig-University Gießen**  
Medicine, Philosophy, (German) Linguistics, Political Science

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## Bachelor Thesis

- Titel *A Deep Reinforcement Learning Environment of the Limit Orderbook Intraday Electricity Market, development and efficient implementation*
- Content Development of an interface between data and modelling paradigm on a theoretical level and implementation as a Python package in combination with a MongoDB. Most important requirement, runtime on the HPC cluster was tested experimentally and positive results were analysed
- Examiners [Professor Nicolas Stein, THM](#) und [Dr. Christoph Scholz, Fraunhofer IEE](#)

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## Jobs

- 2022-2024 **Practical Phase and working student, Fraunhofer IEE, Kassel**, in the group of Dr Christoph Scholz for reinforcement learning for cognitive energy systems
- Activities:
- Conception and implementation of a **Python-Pakets for Deep Reinforcement Learning** in the Intraday Market of EPEX for internal (research-)use:
    - self-guided IT project management according to **agile principles**
    - Benchmarking of the runtime during development with ongoing adjustment for the purpose of runtime optimisation
    - Data structure modeling and maintenance of the MongoDB belonging to the package
    - Design, construction and use of the **ETL-Pipelines to MongoDB in Python**
    - Orchestration of experiments based on the package with Ray on the HPC cluster
    - Processing and analysing experimental results
    - **Collaboration on the creation of the resulting paper**
    - Securing resulting version 1.0 of the package: documentation according to pep8 standards with Sphinx and detailed Readme.md as well a familiarisation of other students
  - Conception and implementation of Jupyter notebooks for the seminar “Energy Data Scientist - Automated Energy Industry” in coordination with the lecturers



## Skills

### Python

Python	■■■■■	Pandas	■■■■■
Numpy	■■■■■	sk-learn	■■■■■
Keras	■■■■■	Ray	■■■■■
Jupyter	■■■■■	Data Visualisation	■■■■■
Anaconda	■■■■■	Django	■■■■■

### Programming and computer science

R	■■■■■	Julia	■■■■■
Java	■■■■■	LaTeX, .md	■■■■■
SQL	■■■■■	MongoDB	■■■■■
Git	■■■■■	CI/CD	■■■■■
UML	■■■■■	HTML, CSS	■■■■■
Cloud Computing	■■■■■	RESTful APIs	■■■■■
Agiles PM	■■■■■	ETL Prozesse	■■■■■
Command line	■■■■■	HPC/SLURM	■■■■■



## Languages

German	Native speaker	English	Advanced
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## Interests

### Social sciences

VWL  
political economy  
(algorithmic) game theory  
climate policy  
industrial policy  
market- and mechanism design  
political science

### Computer Science

IT-Project management  
(Tiny) Machine Learning  
Artificial intelligence  
Research Software Engineering  
DevOps  
Process- and Data modeling  
Evolutionary Algorithms  
Multi agent systems / simulations



## School

2007	<b>Abitur</b> , <i>Evan. Gymnasium Lippstadt</i> , (Electives: Biology, History)
2004	<b>Mittlere Reife</b> , <i>Städtische Gymnasium Erwitte</i>