

# Mark Leznik

DATA SCIENTIST · ML RESEARCHER

 LinkedIn |  Google Scholar

## Summary

Data scientist and machine learning researcher with over 10 years of combined experience in industry R&D and academic research environments. With a computer science and computer engineering background, I have a comprehensive understanding and knowledge of the machine learning applications development life cycle, from data acquisition, storage, reproducible deployment and evaluation, as well as a publication track record in these topics. I have developed methodologies for objective time series evaluation as well as subsequent time series synthesis using Generative Adversarial Networks. My core strengths lie in methodological problem assessment and solution and a goal-oriented approach. I am seeking Data Scientist and Machine Learning Engineer opportunities where I apply my know-how and deliver high quality data analysis insights and results.

## Experience

### Ulm University

Ulm, Germany

RESEARCH ASSOCIATE, LECTURER

Jan. 2018 - Dec. 2023

- STEALTH Project (2020-2022):
  - STEALTH: Anonymisation through Privacy-preserving Data Generation
  - Senior researcher, synthetic time series generation.
- AI Investments Project (2019-2021):
  - AI: An advanced investment tool based on machine learning and big data.
  - Data scientist & scientific consultant for time series analysis and generation.
- RECAP Project (2018-2019):
  - RECAP: Reliable Capacity Provisioning and Enhanced Remediation for Distributed Cloud Applications
  - Data science tasks & research on time series generation for cloud and telecommunication data (Partnership with British Telecom).
  - Assistance in project and deliverables coordination.

### Daimler AG, Mercedes Benz Research and Development (MBRD)

Ulm, Sindelfingen, Germany

WORKING STUDENT, INTERN, BACHELOR- & MASTER THESIS

Juli. 2011 - Apr. 2017

- Research- and series development of several camera monitor prototype vehicles (replacement of the side-mirror with a camera and display)
- Research on surround vision systems (360 degree cameras)
- Night vision near infrared image colorization using synthetic images research

### S.A.D. GmbH

Ulm, Germany

STUDENT SOFTWARE DEVELOPER

Mai. 2010 - Mai. 2011

- Development of dashboards for tracking and predicting downloads of S.A.D. software
- Development of business relations in Ukrainian market

## Education

### Ulm University

Ulm, Germany

PH.D. COMPUTER SCIENCE

Jan. 2020 - Dec. 2023

- Submission: January 2024
- Ph.D. thesis topic: Synthetic Time Series Workload Generation

### Ulm University

Ulm, Germany

M.Sc. COMPUTER SCIENCE

Mar. 2014 - Aug. 2017

- GPA 1.3 (very good), Majors: Computer Vision, Distributed Systems
- Master thesis topic: Luminance Estimation of Colorized Near-Infrared Images (research performed at MBRD Ulm) Grade: 1.0

### Ulm University of Applied Sciences

Ulm, Germany

B.Sc. COMPUTER ENGINEERING

Mar. 2010 - Feb. 2014

- GPA 1.4 (very good)
- Bachelor thesis topic: Low-light Image Quality Optimization of HDR Cameras (research performed at MBRD Sindelfingen) Grade: 1.3

## Skills

<b>Data-Driven Technologies</b>	Machine Learning, Deep Learning, Analysis, Visualization, Computer Vision, Reproducible Research
<b>Programming Languages</b>	Scikit, Pandas, Keras, JupyterLab, Kubernetes, TimeScale DB, InfluxDB
<b>Programming Languages</b>	MATLAB, Python, SQL, JAVA, C++, C#
<b>Languages</b>	German (fluent), English (fluent), Russian (fluent), Hebrew (basic knowledge)

## Other

## FUNDING

VECTOR STIFTUNG STEM RESEARCH GRANT (€120.000)

- Project STEALTH:
- Anonymisation through Privacy-preserving Data Generation

Ulm University  
Jan. 2020 - Oct. 2022

## TEACHING ACTIVITIES

LECTURER, SUPERVISOR

- Supervision of 3 M.Sc. Thesis & 4 B.Sc. Thesis
- Lecture Exercise Introduction to Deep Learning
- Seminar in Selected Topics in Machine Learning (over 15 student works supervised)

Ulm University  
Jan. 2018 - PRESENT

## Selected Publications

### Optimization of demanding scenarios in CMS and image quality criteria

LEZNIK & TERZIS, HANDBOOK OF CAMERA MONITOR SYSTEMS:

THE AUTOMOTIVE MIRROR-REPLACEMENT TECHNOLOGY BASED ON ISO 16505

2016

### Multivariate time series synthesis using generative adversarial networks

LEZNIK ET AL., INTERNATIONAL CONFERENCE ON PERFORMANCE ENGINEERING ICPE 2021, ACM/SPEC

2021

### The Great GAN Bake Off, An Extensive Systematic Evaluation of Generative Adversarial Network Architectures for Time Series Synthesis

LEZNIK ET AL., JSYS, JOURNAL OF SYSTEMS RESEARCH

2022

## Academic Service & Committees

2021- **Vice-Chair**, SPEC Research Group, RG Predictive Data Analytics Working Group

Gainesville, USA

2023 **Organization Committee**, The Second International Workshop on Performance - Data Analytics and Data-Management

Coimbra, Portugal

2022 **Organization Committee**, The First International Workshop on Performance - Data Analytics and Data-Management

Beijing, China

## References

### Dr. Christoph Rössing, Mercedes-Benz AG, Sindelfingen, Germany

TEAM LEAD AUTOMATED DRIVING COOPERATION NVIDIA

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### Prof. Paolo Casari, University of Trento, Italy

ASSOCIATE PROFESSOR, DEP. OF INFORMATION ENG. AND COMPUTER SCIENCE

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### Dr. André Bauer, University of Chicago, USA

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